JULY 12, 1954

"Bi-Partisan" Piggyback . . . p. 55

# RAILWAY AGE

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IN THIS ISSUE:



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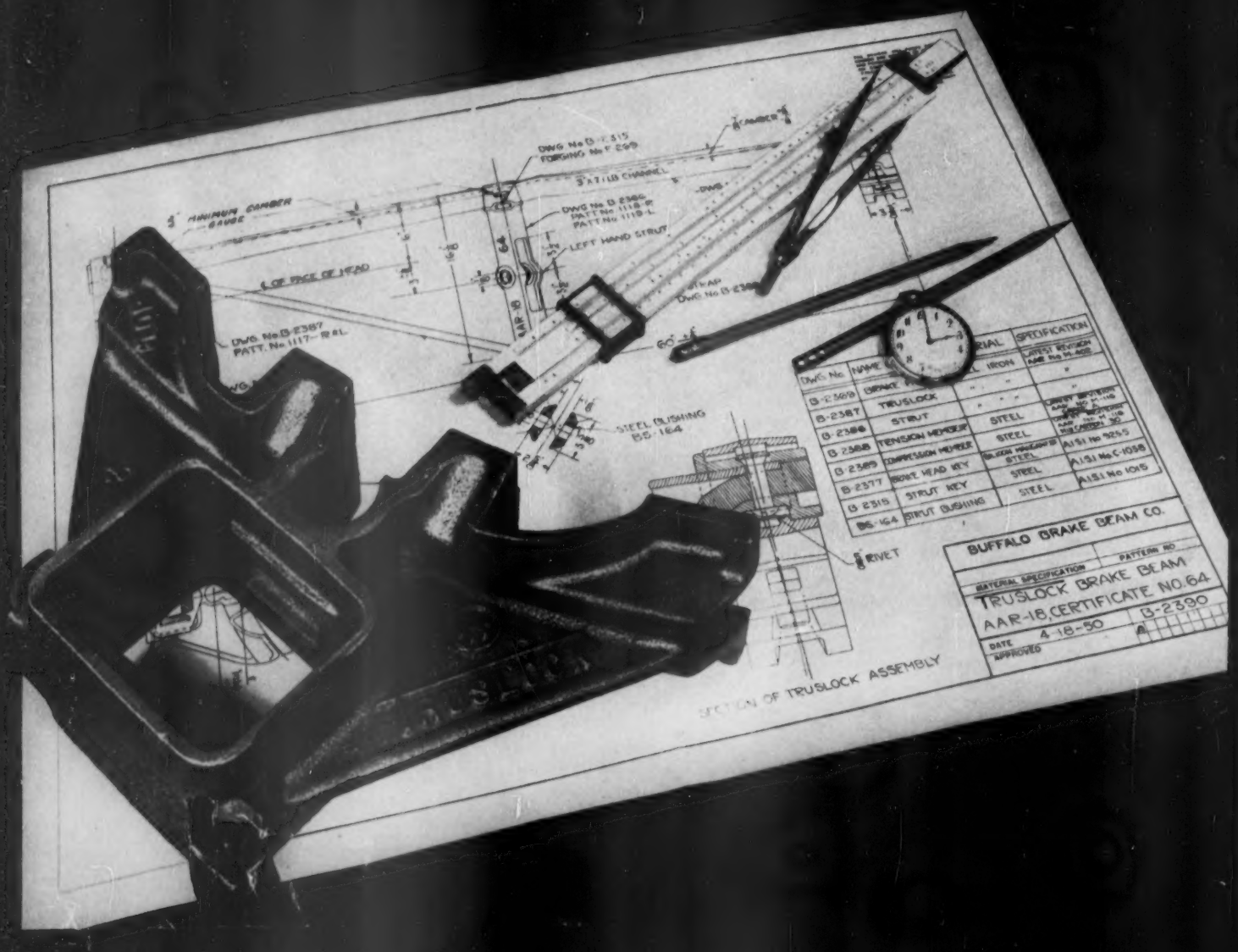


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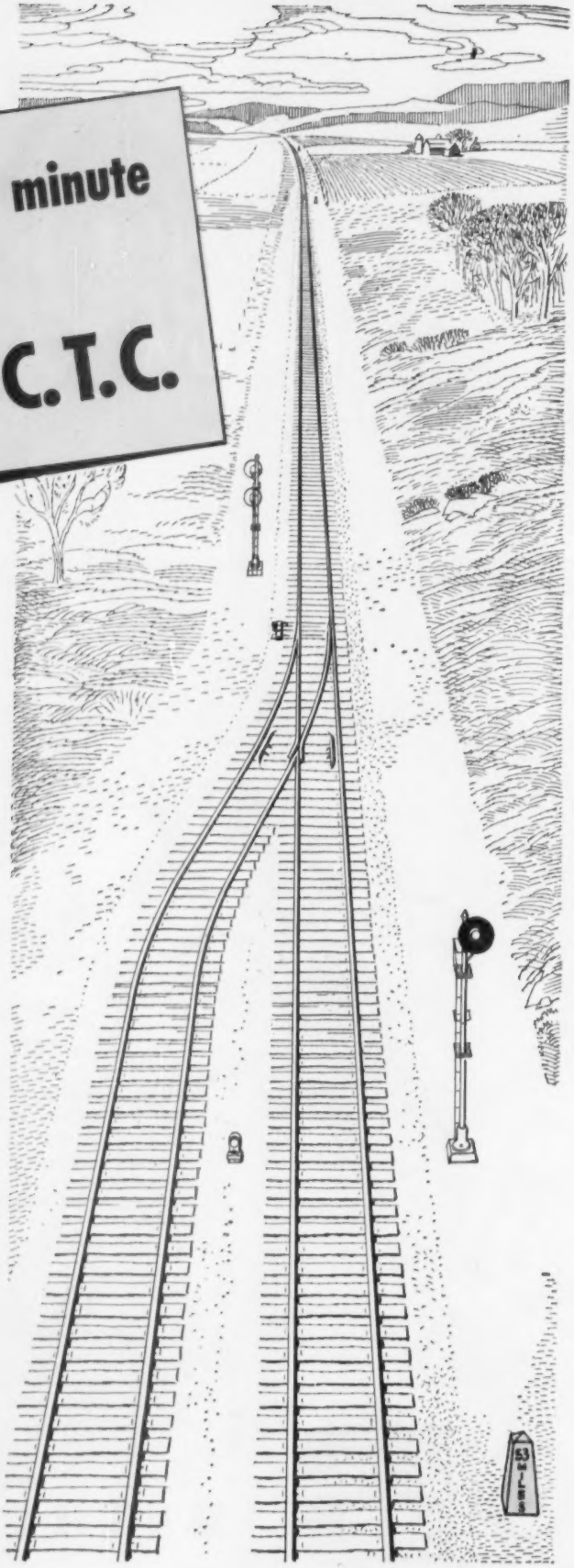

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July 12, 1954 Vol. 137, No. 2

# Week at a Glance

**Disparity between freight-car orders and freight-car retirements** was the subject of a special meeting in Washington, at which car builders outlined the problem to government officials. 8

**An amended version of new car-spotting rules,** as agreed upon by Official-territory railroads and the NIT League, has been approved by an ICC examiner. 9

**Five months' net income** of Class I railroads, at $166 million, was just under half the $338 million reported for the comparable period in 1953. 14

**FORUM: If "diversification"** — of goods produced or services rendered — is sound in principle for other industries (and it certainly seems to be), why isn't it equally sound for railroads? 51

**Do special device cars pay off?** High cost, early obsolescence, and empty mileage are the major problems involved in profitable use of special equipment for handling certain types of traffic. 52

**The Katy's "bi-partisan" piggyback** is a two-way service open to both motor common carriers and the railroad's own patrons. 55

**Plastic spray upgrades box cars,** making them grain-tight and partly damage-free. Rock Island tests indicate that this "cocooning" — similar to "mothballing" — costs only a fraction of former methods of accomplishing the same results. 56

**A line-improvement project** on the Missouri Pacific combines curve elimination, grade reduction and flood protection. 58

## Current Statistics

| | |
|---|---|
| Operating revenues, five months | |
| 1954 | $ 3,805,777,942 |
| 1953 | 4,402,891,403 |
| Operating expenses, five months | |
| 1954 | $ 3,072,350,378 |
| 1953 | 3,333,975,239 |
| Taxes, five months | |
| 1954 | $ 365,310,470 |
| 1953 | 528,226,305 |
| Net railway operating income, five months | |
| 1954 | $ 265,542,524 |
| 1953 | 448,751,912 |
| Net income, estimated, five months | |
| 1954 | $ 166,000,000 |
| 1953 | 338,000,000 |
| Average price railroad stocks | |
| July 6, 1954 | 67.69 |
| July 7, 1953 | 65.52 |
| Carloadings, revenue freight | |
| Twenty-six weeks, 1954 | 16,361,043 |
| Twenty-six weeks, 1953 | 18,926,732 |
| Average daily freight car surplus | |
| Wk. ended July 3, 1954 | 101,581 |
| Wk. ended July 4, 1953 | 32,667 |
| Average daily freight car shortage | |
| Wk. ended July 3, 1954 | 1,947 |
| Wk. ended July 4, 1953 | 5,020 |
| Freight cars delivered | |
| May 1954 | 3,173 |
| May 1953 | 6,582 |
| Freight cars on order | |
| June 1, 1954 | 15,615 |
| June 1, 1953 | 57,345 |

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## Departments



## Week at a Glance CONTINUED

**Streamlined yard operation** has been achieved by the Union Pacific at Denver by a new communications system, which includes loudspeakers, radio, intercoms and walkie-talkies. **60**

**"We'll do all right,** if we'll use all the means at our disposal to adapt our business to changed conditions." That's the idea behind some of the innovations in equipment, service and rates being considered by Patrick B. McGinnis, new president of the New Haven. **63**

**Of 30 new covered hopper cars** now in service on the Monon, 15 will be used for bulk flour service. **64**

BRIEFS

**Something new in long-distance passenger coach design** is scheduled to be unveiled by the Santa Fe at Chicago on July 16. It's the first of two experimental cars built by Budd.

**"Political" shortcomings of "middle-level" railroad** supervisory personnel were thoroughly explored at a recent seminar conducted by the Michigan Railroads Association. Conclusions: Supervisory personnel are too little informed on railroad matters; discuss these too little with the public; take too little part in local civic and political affairs; do too little "mixing" outside their specific duties; are not, generally, qualified to contact local editors, government officials or legislators; and—*railroads have done nothing to inspire them to be more active along these lines, or to keep them abreast of developments in railroading or of railroad problems!*

**Fast, door-to-door LCL service** has been arranged by the Bangor & Aroostook through a contractual agreement with Acme Fast Freight, Inc. The new service is for commodities moving northbound into the road's territory. Should the expected potential be realized, it is hoped the service can be expanded to handle southbound tonnage also.

**Free stock to passengers**—United Airlines gave one

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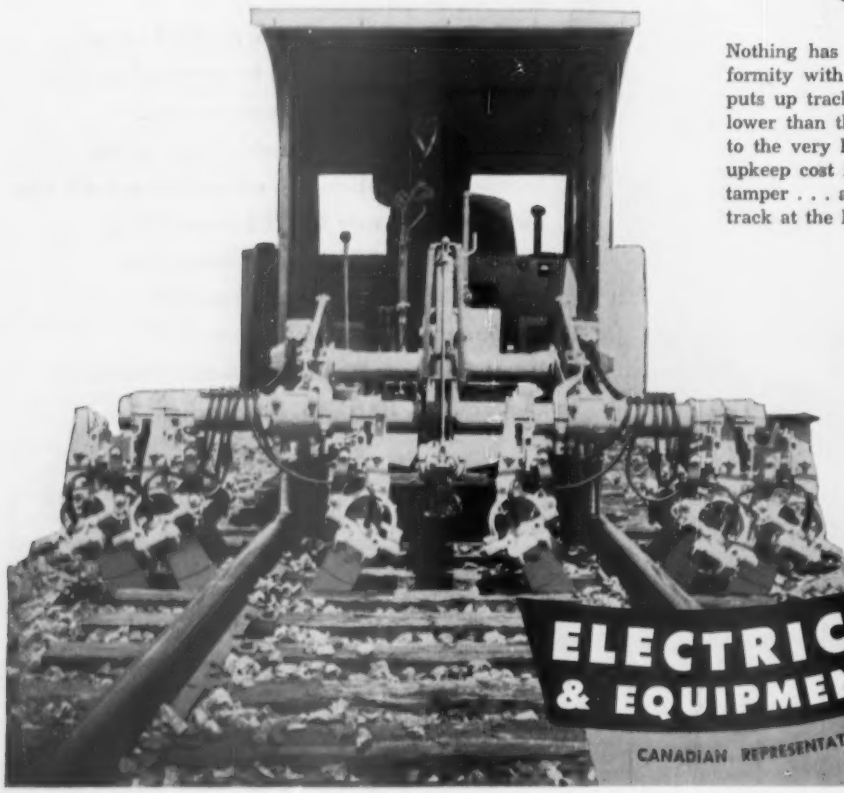

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# Week at a Glance CONTINUED

share of its common stock to each passenger aboard its recent, initial coast-to-coast DC7 flights. About 125 persons received the shares, which sell on the New York Stock Exchange for around $23.

**It would be no surprise** if the ICC were to shorten suspension time on the proposed rail-billed piggyback service of six eastern roads, and shift its worry about "i" dotting to its general rule-making investigation of T-O-F-C, in which a hearing already has been held.

**An LCL routing guide,** similar to the one published by "Louisville Plan" shippers, is being prepared by the Chamber of Commerce of Kansas City, Mo. The guide will show all regularly scheduled LCL service between Kansas City and break-bulk points.

**First use of radio** on through freight trains on the Louisville & Nashville is now in operation; equipment has been installed on 15 locomotives and 33 cabooses used in scheduled freights between Cincinnati and Mobile. Cabooses also are equipped with walkie-talkies which trainmen use when away from cabooses.

**Automatic measurement of the "rollability" of a car,** as it passes down a hump, is another factor which may be included (in addition to speed and weight) in the automatic control of retarders in four large classification yard projects now under way or planned.

**ACF's Talgo train** was shown to the public in Grand Central Terminal, New York, July 8-11, at an exhibition sponsored jointly by Patrick B. McGinnis and Alfred E. Perlman, presidents, respectively, of the New Haven and the New York Central. The train displayed was the one that attained speeds of approximately 100 mph June 29 in a test run between New Haven and Boston (*Railway Age*, July 5, page 9).

**The second staff training course** to be conducted by the Canadian National is now under way at Bishop's University, Lennoxville, Que. About 50 "promising officers" from all over the CNR system are participating in the three-part, seven-week course, which will end July 31.

**U.S. railroads** produce six times as much output with the same amount of capital as they did in 1882, according to the National Bureau of Economic Research. Then, it took $15 of capital to produce $1 of output; in 1948, the same $1 of output required only $2.50 of capital—all figures being adjusted for price changes. Despite the drop, railroads still require more capital than manufacturing industries, which, on the average, in 1948, needed only 65 cents of capital per $1 of product.

**The next few months** look like troubled ones for Canadian railways, with non-operating employees taking a strike vote to enforce their demands for fringe benefits, estimated to cost $60 million a year; with truckers threatening a rate war as reprisal for railroad efforts to compete with them; and with the government inquiring into the operation and effect of "agreed charges," which have heretofore been one of the railways' principal competitive weapons. The non-ops' strike vote, which follows breakdown of direct negotiations and of conciliation efforts, probably will not be completed until August.

**Passengers can look ahead,** right through the driving cab, on light-weight, two-car diesel trains now going into service on British railways.

# Car Builders Hold D. C. Meeting

**Confer with Commerce Department officials in session highlighted by discussion of disparity between freight car retirements and replacements ordered**

The disparity between freight car retirements and replacement orders highlighted a July 1 Washington meeting of representatives of the car-building industry and officials of the Department of Commerce's Business and Defense Services Administration. Car builders represented included railroads which build equipment in their own shops as well as the contract builders.

G. Metzman, chairman and president of the American Railway Car Institute, warned that with new car orders "not even approaching" retirement rates of 60,000 cars a year, "a sizable increase in carloadings could quickly result in shortages of certain types of cars."

**The "Deficiency"**—He stated that there is "a deficiency of 82,000 cars" under the 1,850,000 car goal set by Class I railroads for the end of this year.

"Railroads must maintain," he declared, "an adequate ownership of freight cars in peacetime as well as emergency to meet shippers' needs and retain their inherent position in the transportation industry."

Moreover, he went on, "it is also necessary to maintain an effective, efficient independent car building industry. The railroads alone cannot build sufficient equipment to meet all requirements." Mr. Metzman recommended that the independents be "maintained as an effective, healthy industry and not as a standby industry."

However, he pointed out, while the car retirement rate remains steady, the backlog of new car orders has declined from 29,950 to 15,615 since the first of the year. Also, he went on, car builders' employment rolls have declined by 35% in the same period, with five of their plants shut down. Independent car builders, Mr. Metzman said, also are continuing to diversify their activities because of lack of car orders "and to keep their capital employed."

**More Traffic the Key** — Other spokesmen for the industry questioned the possibility of any substantial increase in orders without a pickup in railroad business. Noting that there had been some recent increase in car loadings, they expressed apprehension over continued "subsidized" competition and suspension of tariffs proposing piggyback haulage by railroads. They also indicated that temporary freight-rate increases due to expire at the end of 1955 should be made permanent if the railroads are to continue purchases of new rolling stock.

Mr. Metzman said that, ideally, "production in all shops must average in excess of 90,000 cars annually."

With 650,000 freight cars now in service over 25 years of age and 112,000 in need of repairs, he continued, "total war would again place staggering demands upon the rail transportation system."

**Military Needs**—Owen Clark, defense transport administrator and interstate commerce commissioner, said that to cope with mobilization needs, 2,000 coaches and 2,500 sleeping cars for military use are urgently needed. He suggested building experimental cars as a means of getting the jump on conditions in the event of war. Predetermination of the type of cars needed, would save the country six months' building time, he said.

Among other issues discussed at the conference was that of giving American car builders better opportunity to place bids on equipment ordered by countries under Foreign Operations Administration funds. An FOA official reported this is already under consideration.


**NEW MEMPHIS TICKET OFFICE opened by the St. Louis-San Francisco on June 1 features backlighted color murals depicting scenes in the Ozarks, Florida and other points served by the system. When the office was removed from former quarters elsewhere, the freight traffic offices were located separately in the Union Planters National Bank.**

## People in the News

### O'Neill Remains NMB Chairman for Fiscal '55

Francis A. O'Neill, Jr., has been re-elected by the National Mediation Board as its chairman for another year from July 1. Mr. O'Neill has been a member of the board since March 1947.

### C. P. Richardson Retires

Charles P. Richardson, Illinois state civil defense transportation deputy since 1951, retired from active duty July 1. A graduate of Dartmouth College and the Thayer School of Civil Engineering, Mr. Richardson entered railroad service with the Missouri Pacific in 1909; served with the Rock Island in various engineering positions from 1912 through 1945; became terminal engineer for the Chicago south side railway terminal committee on January 1, 1946, and was named to the civil defense post five years later. In that capacity, he completed a comprehensive emergency plan for railroads operating in Illinois.

### Senate Confirms Winchell for ICC

The Senate on July 2 confirmed President Eisenhower's appointment of John H. Winchell to the Interstate Commerce Commission.

The nomination had been reported favorably on the previous day by the Senate Committee on Interstate and Foreign Commerce. The committee action followed a brief hearing at which its chairman, Senator Bricker of Ohio, read letters from Colorado Senators Johnson and Milliken. Both approved the designation.

Senator Schoeppel of Kansas drew

from Mr. Winchell the statement that there is nothing in his associations or experiences that would interfere with his duties on the ICC. Mr. Winchell noted that, as a member and chairman of the Colorado Public Utilities Commission, he had had to divest himself of "any interest direct or indirect," in utilities (*Railway Age*, June 21, page 7).

## Traffic

# Revised Spotting Rules Proposed

### ICC examiner would approve amended and agreed-on version of terminal service tariff provisions

The Interstate Commerce Commission has served upon interested parties a proposed report wherein Examiner Walter D. McCloud recommends approval of an amended version of new car-spotting rules which were agreed upon by a committee representing Official-territory railroads and the National Industrial Traffic League.

The rules would be added as a note to the joint agency tariff covering spotting services in Official territory. The tariff was designed to bring spotting services of the participating railroads in line with principles set out by the commission in its report on the terminal-service phase of its Ex Parte 104 investigation of practices affecting operating revenues and expenses.

**Interpretation of Tariff** — The tariff became effective January 1, 1946, and in 1950, the commission instituted an investigation to determine how the railroads were applying it. Out of that proceeding, docketed as No. 30556, came a proposed report by Examiner S. R. Diamondson who advised the commission to condemn the tariff as unlawful as it was being interpreted by the railroads.

Railroad and commission interpretations, Mr. Diamondson said, were "so completely in conflict as to require cancellation of the tariff or abandonment of [the Ex Parte 104] principles." (*Railway Age*, April 13, 1953, page 12.) The commission took no action with respect to the Diamondson report, and this year the issue went to Congress. A car-spotting bill, generally identified as the NITL bill, was introduced in the Senate by Senator Butler, Republican of Maryland. (*Railway Age*, March 8, page 13.) The Senate Committee on Interstate and Foreign Commerce recently postponed indefinitely its consideration of the bill, which is S. 3021.

**McCloud Report**—Next development was issuance on July 7 of the McCloud report which is a second proposed report in the No. 30556 proceeding. An accompanying notice said the commission's Division 3, which has administrative charge of the case, had served it for the purpose of obtaining views of all interested parties. Such presentations will be due on or before August 15.

The notice also revealed that the railroad-NITL committee submitted its proposals at the suggestion of Division 3. They were received in evidence as part of the record considered by Examiner McCloud. He condemned them as submitted, advising the commission that their adoption would "completely set aside many of the Ex Parte 104 principles without preserving any of their benefits necessary to the preservation of an efficient national transportation system."

The examiner then went on to recommend modifications designed, as he put it, to shape the proposals into rules which would permit the railroads "to perform a complete service that would be just and reasonable and not otherwise unlawful."

**The rules** would specify delays which would be permitted in connection with car-spotting operations without charge in addition to line-haul rates. The language recommended by the examiner is shown below, with the railroad-NITL proposals shown in parentheses in each case:

1. The holding of loaded cars on industry tracks for carrier's operating convenience. (The temporary holding of cars on tracks of the carrier or industry for instructions from the shipper or receiver.)

2. Partly loaded or unloaded cars may be reset for carrier's convenience when incidental to the placement or removal of other cars. (The removal and replacement of cars partially loaded or unloaded when incident to the placement or removal of other cars.)

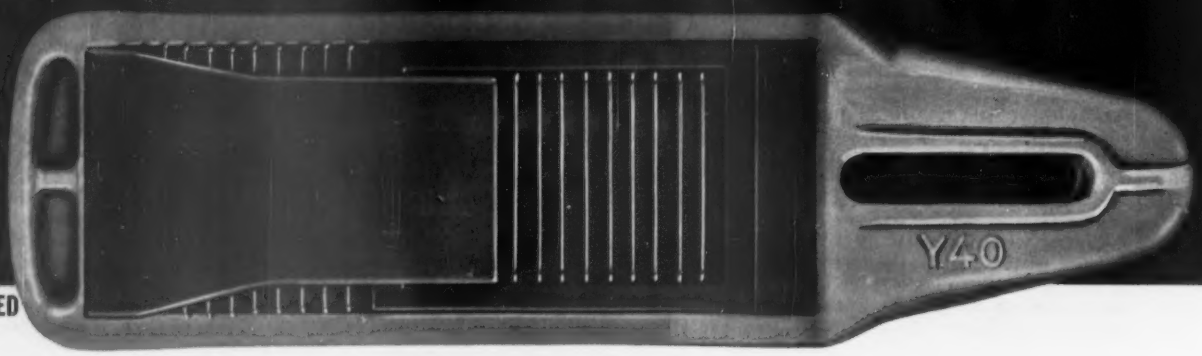
3. The weighing on an industry scale of loaded cars when the weight is required for billing purposes. (The service of securing the weight of freight, irrespective of the ownership of the scales used, where the weights obtained are used by the carrier for billing purposes.)

4. Classifying, sorting and lining up cars on industry tracks for carrier's convenience. (Classifying, sorting and

**A GOLDEN SPIKE, marking the 100th anniversary of completion of the Monon, is driven home by Senator Homer Capehart and Miss Sue Sherrier, as President Warren Brown (seated) looks on. The brief ceremony, which took place near Greencastle, Ind., commemorated June 24, 1854, when Monon rails first linked the Great Lakes and the Ohio river.**

# NOW a WAUGHMAT *Twin Cushion* that is interchangeable with any friction draft gear

## fits any A.A.R. standard yoke

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**28,500** ft. lbs.

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lining up cars on industry or carrier tracks.)

5. Interference on industry tracks resulting from the operations of one or more rail carriers. (Delay and interruption resulting from the operations of a common carrier on industry tracks.)

6. Operations incidental to a switching service for which a separate charge is published. (Operations performed in providing a service for which a separate charge is authorized pursuant to a published tariff.)

## Loading Forecast For Third Quarter

Freight carloadings in the third quarter of 1954 are expected to be 8.6% below those in the same period in 1953, according to estimates of the 13 regional shippers advisory boards.

On the basis of those estimates, loadings of the 32 principal commodity groups will be 7,334,436 cars in the third quarter of 1954, compared with 8,022,924 actual loadings for the same commodities in the corresponding period last year. The Pacific Northwest Board was the only one to estimate an increase. The other 12 boards estimated reductions.

The tabulation shows actual loadings for each district in the third quarter of 1953, the estimated loadings for the third quarter of 1954, and the percentage of change.

| Shippers Advisory Boards | Actual Loadings Third Quarter 1953 | Estimated Loadings Third Quarter 1954 | Percent Decrease |
|---|---|---|---|
| New England .. | 105,136 | 100,818 | 4.1 |
| Atlantic States .. | 763,480 | 676,621 | 11.4 |
| Allegheny ..... | 907,522 | 757,719 | 16.5 |
| Ohio Valley ... | 945,552 | 829,614 | 12.3 |
| Southeast ..... | 935,360 | 935,258 | 0.01 |
| Great Lakes ... | 715,853 | 596,291 | 16.7 |
| Central Western | 269,055 | 250,464 | 6.9 |
| Mid-West ..... | 908,652 | 851,949 | 6.2 |
| Northwest ..... | 886,446 | 781,753 | 11.8 |
| Trans-Missouri-Kansas ..... | 400,898 | 395,511 | 1.3 |
| Southwest ..... | 507,979 | 491,414 | 3.3 |
| Pacific Coast .. | 402,311 | 375,279 | 6.7 |
| Pacific Northwest | 274,680 | 291,745 | 6.2 inc. |
| TOTAL .....8,022,924 | | 7,334,436 | 8.6 |

The boards expect increases in loadings of nine of the commodities listed and decreases in 23.

**Nine Increases**—Commodities for which increases are estimated include: Frozen foods, fruits and vegetables, 6.4%; fertilizers, 5%; cement, 2.7%; livestock, 1.9%; sugar, syrup and molasses, 1.7%; grain, 1.6%; food products in cans and packages, 1%; salt, 0.6%; and hay, straw and alfalfa, 0.5%.

Commodities for which decreases are estimated include: Automobiles and trucks, 30%; citrus fruits, 25%; ore and concentrates, 19.1%; coal and coke, 14.3%; iron and steel, 14.1%; potatoes, 10.9%; machinery and boilers, 8.7%; brick and clay products, 8.5%; agricultural implements and vehicles other than automobiles, 7.5%; cotton, 6.8%; metals other than iron and steel, 6.6%; gravel, sand and stone, 6.5%; and vehicle parts, 6%.

## U. S. Chamber Group Reviews Traffic Trend

A midyear review by the Transportation and communication Department of the United States Chamber of Commerce shows air, barge and pipe line traffic setting new records while rail traffic and revenues decline.

The Chamber's "Transport Review and Outlook" reports truck traffic also down but expected to pick up in what still is the "second best year for the industry."

Aviation passenger miles, the report states, are up 10% but cargo and freight traffic are "down rather sharply." The barge lines show expected gain of 15% or 75 billion ton-miles and petroleum pipe lines are "rising to record levels" in revenues and traffic.

However, the analysis states, the railroads' operating ratio "is over 80% for the first time since 1950." Carloadings, freight and passenger traffic are all down.

The railroad equipment industry also is suffering, the Chamber reports, with locomotive and car orders at "rock bottom." Railroad capital expenditures are down 20% for the first half of 1954, the report states, with a further decline to 30% possible for the year.

# Operations

**ECONOMIC ASPECTS OF TRAILER-ON-FLAT-CAR operations were up for discussion at a June 24 forum sponsored by the educational committee of the Traffic Club of Chicago. Moderator Robert N. Burchmore (center) was flanked by Panelists Robert O. Small (Chicago & North Western), Harry O. Mathews (Armour & Co.), William Noorlag, Jr. (Central Motor Freight Association of Illinois), and Eugene F. Ryan (Rail-Trailer Co.).**

# "Don't Hog-Tie Piggyback"

### Panel group at Chicago Traffic Club hears plea that T-O-F-C service be left free of regulation

Railroads should be permitted to develop piggyback operations without being hampered by restrictive rules and regulations from regulatory agencies.

That point was emphasized by Robert O. Small, vice-president—rates and divisions, Chicago & North Western, at a June 24 panel discussion on economic aspects of trailer-on-flat-car operations. The forum, held in Chicago, was sponsored by the educational committee of that city's Traffic Club.

Panel members, in addition to Mr. Small, were Eugene F. Ryan, president, Rail-Trailer Company; Harry O. Mathews, general manager of transportation, Armour & Co., and William Noorlag Jr., general manager, Central Motor Freight Association of Illinois. Robert N. Burchmore served as moderator.

"We believe railroads should be permitted, without any handicaps being placed in their way, to develop this type of service, and we are hopeful the ICC and state commissions will in the final analysis not hamper this development with restrictive rules or regulations not applicable to freight handled in other types of equipment now in general use," Mr. Small declared.

Mr. Small said high terminal costs caused his road to begin T-O-F-C operations in August 1953. The service has been greatly expanded since then, but, he said, "we still have only scratched the surface." Response of shippers has been gratifying, transit time has been cut, and damage claims reduced.

The C&NW has an "open mind" as to general policy on piggyback, he

added. There has been no expansion to bring in motor common carriers, because negotiations so far "have not developed a satisfactory revenue return when all costs . . . are considered."

**No "Miracle Drug"**—Mr. Noorlag said it was his position that piggybacking is "a highly exaggerated subject, belabored to the skies as a cure-all."

He noted that even railroads themselves are not in agreement on how to conduct T-O-F-C operations.

The motor carrier operator must look at the advantages he will get from this service, but is not yet in a position to weigh its pros and cons, he added. One question he must bear in mind is: What will happen to his operating rights? Will their value decay if he turns to piggybacking?

Mr. Noorlag said another basic question is whether railroads can make a profit and still provide service at a rate that will attract motor carrier business. He said service made the trucking industry, and if piggybacking does not help improve that service and lower costs "it is not to be desired." Most of the service that has been held out to us so far, Mr. Noorlag said, "we can match over the highway day after day."

**Roadblocks** — The motor carrier spokesman went on to point out other "problems" he sees in T-O-F-C development. Short distances do not appear to be practical, and perhaps only key points with heavy traffic volume can be served because of terminal requirements. There seems little possibility that intermediate points could be served at all. In addition, he continued: "Where will railroads get so much open-top equipment? What about national defense implications of tying together two major forms of transport? How will the teamsters' union react?"

Mr. Ryan, whose Rail-Trailer Company is setting up a piggyback operation for the New York Central, discussed the greater equipment utilization which he said would be realized under T-O-F-C. He said his studies indicate freight cars are loaded about 20 times a year, and the average motor carrier about 112 times. Yet the New Haven in 1953 got 153 loadings per car for flats assigned to its "Trailiner Service."

Mr. Ryan said there are many ideas on how piggyback service should develop, but he believes the ideal is to join motor common carriers and railroads in a coordinated operation where each will perform the type of service it does best. He figures about 15% of motor common carrier truck traffic could be handled piggyback.

The NYC service, which will begin in October, according to Mr. Ryan, will be limited to motor common carriers. The R-T officer said this proposed service is not affected by proceedings now under way before the ICC.

Mr. Mathews, representing the shipper view, said all the talk of economy surrounding piggyback operations is "very intriguing." He called "improved service and cost" the key to successful T-O-F-C, and said his own company would like to see new services developed that might meet some of their more or less special shipping needs.

Since Armour & Co. operates a substantial fleet of private trucks, Mr. Mathews said, "we are interested in the legal angles of piggybacking as well as the economic aspects."

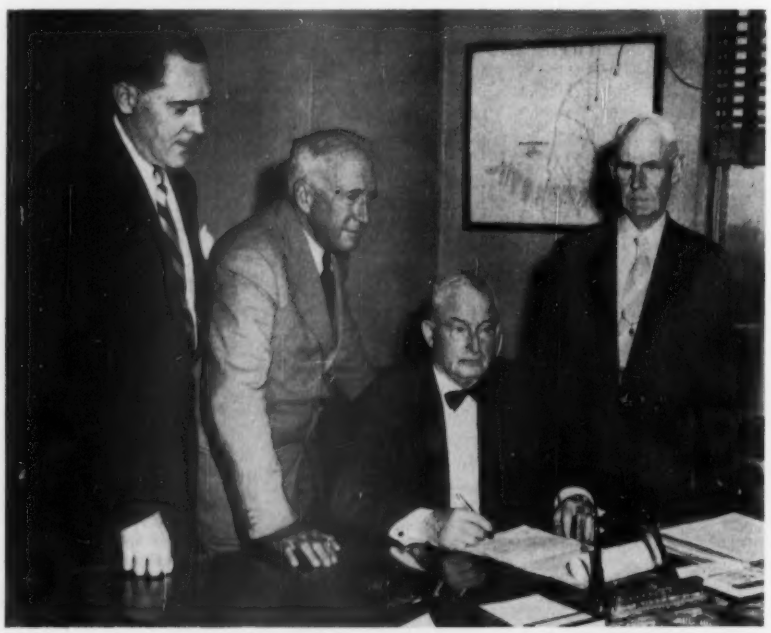
# Mexican Gateways Out Indefinitely

## Laredo bridge loses several spans—Damage at Eagle Pass extensive—MoPac handling passengers via Brownsville—SP main line restored to service

No one could say, at press time for this issue, just when through rail service might be restored via the flood-damaged Mexican rail gateways of Laredo, Tex., and Eagle Pass. Spokesmen for both the Missouri Pacific and the Southern Pacific said it was still too early to forecast when damage wrought by the raging Rio Grande might be repaired at those—the two hardest hit of all interchange points with the railways of Mexico.

But the Southern Pacific restored full freight and passenger service on the El Paso-New Orleans main line which had been washed out at several points where it parallels the Rio Grande (*Railway Age*, July 5, page 12). Two freight trains passed over the damaged sections of line near Langtry about 4 a.m. July 7, and a scheduled passenger train followed in about four hours. Embargoes covering the territory between Del Rio and El Paso have been lifted.

To accommodate passengers between U. S. and Mexican points, Missouri Pacific is operating a through sleeping car between Houston and Mexico City via Brownsville and Brownsville and Matamoros in the lower Rio Grande valley. This territory was not affected by the floodwaters, which were held back by Falcon dam and Reservoir about 100 miles upstream. The National of Mexico is operating its streamlined "Aztec Eagle" in part via this temporary gateway. The remainder



**THE LARGEST PURCHASE of Budd rail-diesel cars ever made by any railroad was completed for the Boston & Maine on July 2, when President T. G. Sughrue signed a contract for 55 of the all-stainless-steel, self-propelled, deluxe passenger units, which the B&M calls "Highliners." The 55 RDCs, plus 12 diesel locomotives authorized at the same time in a total $11-million purchase, will, when delivered next year, completely dieselize the B&M (*Railway Age*, July 5, page 10). From left to right in the photo are R. M. Edgar, vice-president—passenger service, B&M; Fitzwilliam Sargent, vice-president—railway sales, Budd Company; Mr. Sughrue; and F. W. Rourke, vice-president—operations, B&M.**

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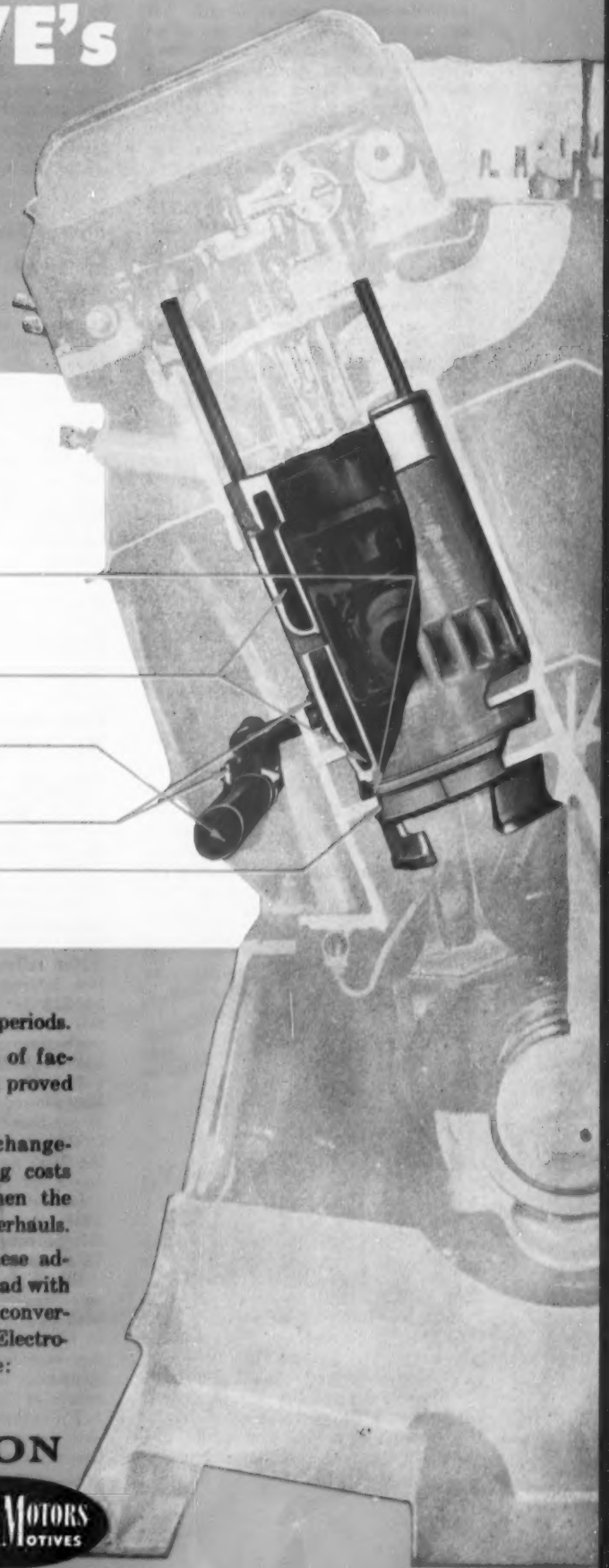

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of the equipment is being operated to Nuevo Laredo—normally the train's northern terminus—or as close to that city as day-by-day operating conditions permit. The MP, in turn, is operating local service from San Antonio to the nearest possible point to Laredo.

As soon as the highway and footbridge across the Rio Grande can be restored to service, the MoPac and NdeM will discontinue the Brownsville operation and bridge the gap at Laredo by buses. The MP said it had received no estimate as to when such service might be possible; meanwhile, tickets routed via Laredo-Nuevo Laredo are being accepted via Brownsville and Matamoros.

## Pacific Board Calls Faulty Switching Damage Cause

The major cause of damage to carload freight is faulty terminal switching, according to the Pacific Coast Shippers Advisory Board. At a recent meeting in San Jose, Cal., the board passed a resolution calling upon railroads "to reexamine their present switching methods for the purpose of minimizing or eliminating this cause of damage."

The board's next meetings are scheduled for September 9-10, in the Biltmore Hotel, Los Angeles, and March 10-11, 1955, in the Hotel Sir Francis Drake, San Francisco.

## JCL 100% Diesel

The Jersey Centr..l Lines, on July 3, received the last of seven 2,400-hp "Train Master" diesel units recently ordered from Fairbanks, Morse & Co. (*Railway Age*, April 5, page 78); JCL train service is now completely dieselized.

The "Train Masters" were purchased to haul the longer and faster passenger trains which the road is running in the recently inaugurated "hourly service" schedule on its main line (*Railway Age*, June 14, page 67). For some time, all road freight and passenger trains have been diesel hauled; now yard operations also are dieselized.

## PRR Establishes New N.Y.-Chicago Through Freight

A new through freight train to Chicago, the "West Coast Clipper," has been inaugurated by the Pennsylvania to expedite both carload and LCL shipments from eastern seaboard cities to the West Coast and other western points. Shipments made on the new train from the eastern seaboard arrive on the West Coast the seventh day, for eighth morning delivery.

Leaving Jersey City at 10:30 p.m. nightly with cars assembled from the Greater New York area and New England, the "Clipper" stops to pick up additional cars only at Enola (Harrisburg, Pa.) and at Altoona for connections from Baltimore, Philadelphia, Camden, Lancaster, Hagerstown, Wilkes-Barre and intermediate points. The train then runs to Chicago, arriving at the 55th Street yards with its cars already classified for delivery to connecting western lines.

## Faster Freight Service Chicago to Des Moines

The Rock Island began a new nine-hour overnight freight service from Chicago to Des Moines, Iowa, on July 7. Designated as "Des Moines Rocket Freight," the new train handles no set-out cars for intermediate points. It leaves Chicago at 8 p.m. and arrives at Des Moines at 5 a.m.—just three hours longer than the road's fastest passenger schedule between the same points. A railroad spokesman said this new freight schedule would be "rigidly adhered to."

# Figures of the Week

## Five Months Net Off $172 Million

Class I railroads in the first five months of this year had an estimated net income, after interest and rentals, of $166,000,000, according to the Bureau of Railway Economics of the Association of American Railroads.

This compared with a net income of $338,000,000 in the same period of 1953.

Net railway operating income, before interest and rentals, was $265,542,524 for the first five months of this year. The comparable figure for the corresponding period last year was $448,751,912.

**May Results**—Estimated results for May showed net income of $39,000,000, as compared with $74,000,000 for May 1953. Net railway operating income for the 1954 month was $58,880,849. The figure for May 1953 was $95,387,443.

In the 12 months ended May 31, 1954, the rate of return averaged 3.49%, compared with 4.41% in the 12 months ended May 31, 1953.

Gross in the first five months of 1954 amounted to $3,805,777,942, compared with $4,402,891,403 in the same period of 1953, a decrease of 13.6%. Operating expenses came to $3,072,350,378 compared with $3,333,975,239, a decrease of 7.8%.

Thirty-three Class I roads failed to earn interest and rentals in the first five months of 1954; 19 were in the Eastern district; two in the Southern region, and 12 in the Western district.

CLASS I RAILROADS—UNITED STATES

| | *Month of May* | |
|---|---|---|
| | *1954* | *1953* |
| Total operating revenues | $765,120,855 | $901,643,672 |
| Total operating expenses | 616,844,278 | 680,521,238 |
| Operating ratio—per cent | 80.62 | 75.48 |
| Taxes | 67,971,609 | 106,272,753 |
| Net railway operating income (Earnings before charges) | 58,880,849 | 95,387,443 |
| Net income, after charges (estimated) | 39,000,000 | 74,000,000 |
| | *Five Months Ended May 31* | |
| Total operating revenues | $3,805,777,942 | $4,402,891,403 |
| Total operating expenses | 3,072,350,378 | 3,333,975,239 |
| Operating ratio—per cent | 80.73 | 75.72 |
| Taxes | 365,310,470 | 528,226,305 |
| Net railway operating income (Earnings before charges | 265,542,524 | 448,751,912 |
| Net income, after charges (estimated) | 166,000,000 | 338,000,000 |

## Freight Car Loadings

Carloadings of revenue freight for the week ended July 3 were not available when this issue of *Railway Age* went to press.

Loadings for the week ended June 26 totaled 713,160 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, June 26

| District | 1954 | 1953 | 1952 |
|---|---|---|---|
| Eastern | 113,700 | 137,964 | 109,338 |
| Allegheny | 131,218 | 167,690 | 99,676 |
| Pocahontas | 50,138 | 59,496 | 54,261 |
| Southern | 116,476 | 125,234 | 116,648 |
| Northwestern | 115,451 | 133,571 | 68,931 |
| Central Western | 125,102 | 130,449 | 131,180 |
| Southwestern | 61,075 | 64,046 | 66,446 |
| Total Western Districts | 301,628 | 328,066 | 266,557 |
| Total All Roads | 713,160 | 818,450 | 646,480 |
| Commodities: | | | |
| Grain and grain products | 63,928 | 60,023 | 69,132 |
| Livestock | 5,458 | 6,971 | 5,029 |
| Coal | 119,230 | 142,218 | 128,361 |
| Coke | 7,396 | 13,710 | 4,181 |
| Forest products | 37,910 | 47,101 | 44,208 |
| Ore | 71,588 | 93,531 | 10,042 |
| Merchandise l.c.l. | 61,083 | 66,736 | 68,937 |
| Miscellaneous | 346,567 | 388,120 | 316,590 |
| June 26 | 713,160 | 818,450 | 646,480 |
| June 19 | 707,208 | 812,578 | 643,969 |
| June 12 | 697,583 | 797,252 | 631,042 |
| June 5 | 612,315 | 775,489 | 684,247 |
| May 29 | 689,292 | 786,755 | 696,860 |
| Cumulative total, 26 weeks | 16,361,043 | 18,926,732 | 18,535,925 |

**In Canada.**—Carloadings for the seven-day period ended June 21 totaled 75,989 cars, compared with 72,525 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

| | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|---|---|---|
| Totals for Canada: | | |
| June 21, 1954 | 75,989 | 27,720 |
| June 21, 1953 | 85,511 | 32,714 |
| Cumulative Totals | | |
| June 21, 1954 | 1,640,818 | 695,419 |
| June 21, 1953 | 1,828,827 | 783,066 |

## Competitive Transport

### WASHO Axle-Load Tests End; Report Due in '55

The so-called WASHO tests of impacts of varying truck axle loads on different thicknesses of highway pavement have been completed, but a final report will be delayed until next year.

This has been announced by the Highway Research Board, Washington, D.C., which is conducting the study for the Western Association of Highway Officials. The test road was in Idaho, and the tests involved application of 238,000 heavy axle loads to each of the test pavements. Eight trucks carried test loads made up of concrete blocks a total of 630,000 miles.

All the information gathered in the tests "will be carefully scrutinized to insure that all factors contributing to pavement failure are considered," the research board's statement said. It added that the final report will be published "probably in the spring of 1955."

### *MORE DEMANDS FROM THE BRETHREN*

**With the ink barely dry on last month's arbitration award, the order of Railway Conductors and Brakemen has served another set of demands upon the Pullman Company.**

**The recent award of a 205-hour month for sleeping car conductors (*Railway Age*, June 7, page 13) became effective June 10. Before the end of the month, A. G. Wise, executive vice-president of the union and also general chairman on the Pullman system, made new demands which would result in a wage increase of 10.4 cents an hour, or about $21.50 a month. In addition the ORC&B is asking for a new vacation schedule that would provide one week for those having one to five years' service, two weeks for between five and 10 years' service and three weeks thereafter. In monthly terms, the proposed wage hike would raise the present beginning pay for sleeping car conductors from $385.15 to $406, and for those men with 15 or more years' service from the present $418.15 to $439.**

**The same demands also have been served upon the Milwaukee, which operates a number of its own sleeping car lines.**

**The Switchmen's Union of North America will soon seek an aditional 28 cents per hour for its members who are currently working on 40-hour week schedules. For those who have yet to go on such a work week, the union will seek 32 cents an hour. This is essentially the same demand as that recently prepared by the Brotherhood of Locomotive Firemen & Enginemen (*Railway Age*, June 14, page 13).**

## New Facilities

### CTC for SP's "Cascade" Line

Having completed installation of centralized traffic control between Klamath Falls, Ore., and Crescent Lake—97.4 miles—the Southern Pacific has begun work on a second installation to cover the 95.4-mile territory between Crescent Lake and Eugene.

This is single-track territory and includes a 43.8-mile helper district between Oakridge (elevation, 1,206 ft) and Cascade Summit (elevation, 4,480 ft). The line has numerous 8-deg curves and a ruling grade of 1.8%. The new project will include equipping 19 sidings with power-operated switches.

All but one siding will hold 101 cars, plus engine and caboose. To obtain this capacity, it was necessary to extend existing sidings from 200 to 1,500 ft. Because of prohibitive physical conditions, the one shorter siding will have a capacity of 89 cars—not sufficient for maximum tonnage trains but helpful for meeting and passing helper engines, work and passenger trains.

A fireproof building already has been completed at the Eugene yard, to house, in addition to the CTC control machine, three other dispatchers and a chief dispatcher. Movable wall panels and a suspended ceiling system provide flexibility in room layout.

Except for approximately 36 miles of trenching, where underground signal cable will replace open-line construction, work is being undertaken by SP forces.

**Other Projects**—To eliminate sharp curves at both approaches to a bridge over the Clackamas river near Portland, the company is building a new line and a new bridge (five 110-foot through-plate girder spans) at a total cost of about $711,000. Construction of the sub-structure for the bridge is covered in a contract to Lee Hoffman, Beaverton, Ore.

Two truss spans over the Merced river near Livingston, Cal., are being replaced by two 100-ft and one 60-ft deck-plate girder spans, at a total estimated cost of $209,000. Morrison-Knudson Company will build the substructure and company forces will erect the superstructure.

Detector fencing will be installed on the Cascade line north of Klamath Falls for 1.6 miles, adjoining 2.2 miles already in service. This project's cost has been estimated at $44,000.

Automatic crossing gates are being installed at Market, Main and Weber streets in Stockton, Cal., where from four to six tracks are crossed. Provision has been made for part-time manual operation during periods of peak switching moves to minimize delay to vehicular traffic. A new 15-ft control tower was built as a part of the $63,000 project, which is expected to result in an annual saving of $20,000 by releasing four crossing watchmen for duty elsewhere.

**Canadian National.**—This company's new $20,000,000 hotel in Montreal (*Railway Age*, November 9, 1953, page 41), will be completed in the early fall of 1957. Work on the 20-story building began June 23, Donald Gordon, CNR chairman and president said, and erection of steel is scheduled to start by December 1.

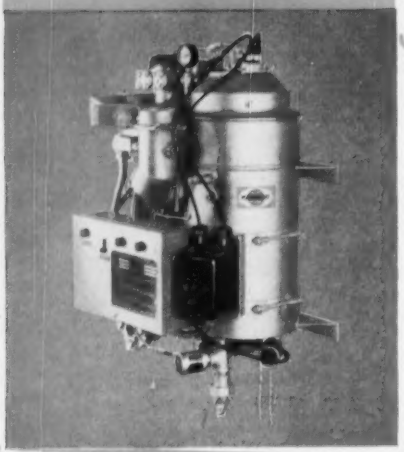
**Lehigh Valley.**—Construction of a new passenger and freight terminal in Buffalo, N.Y., is being considered. Proposed construction is in connection with the recent decision of the New York State Thruway Authority to purchase, for $6,950,000, certain LV property in Buffalo (*Railway Age*, May 24, page 13). Construction plans are being prepared as a precautionary measure, James J. Swift, vice-president and general manager, said, although studies are continuing with the Lackawanna and New York Central to determine if use of their respective facilities would be practicable.

**New Orleans Public Belt.**—It has been proposed that Claiborne Avenue classification yard—which handles all cars moving to or from the newly developed industrial area along the Inner Harbor Navigation Canal—be enlarged from its present capacity of 256 cars to 468 cars. This would be carried out by using two of the present car repair tracks there and by construction of seven new tracks. It would involve shifting the Belt's present car repair facilities to a more westerly location; replacement of several temporary car repair buildings by two main buildings; and possible construction of an open shed to partially cover two repair tracks for work on as many as 12 cars at a time. The project would enlarge capacity of repair tracks from 45 to 79 cars. Buildings to be constructed would include two main repair buildings, 30 x 140 ft and 30 x 180 ft, respectively; a concrete storage platform 20 x 100 ft; a lumber storage rack 25 x 90 ft; an oil and paint house, and several smaller structures. The plan dovetails into a grade separation project considered by the Louisiana state highway department.

**Reading.**—Construction of a new yard at Reading, Pa., is contemplated, Joseph A. Fisher, Reading president, said in an address June 18 before the New York Society of Security Analysts. The yard would replace seven smaller

(*Continued on page 65*)

# Say "Good-by" to costly engine-idling





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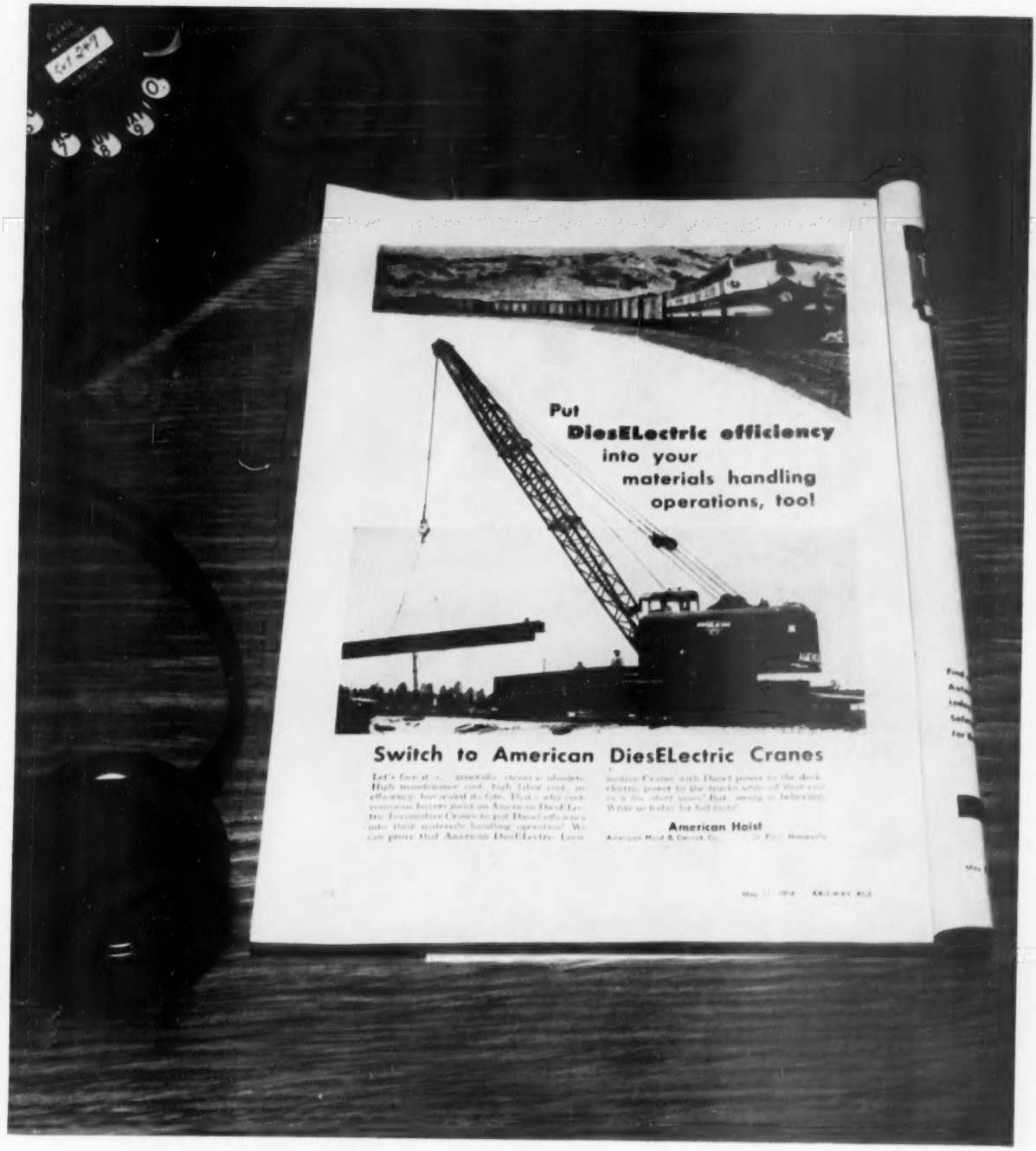


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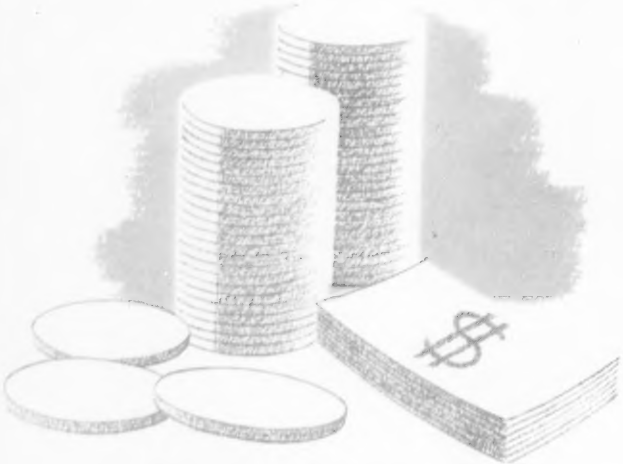
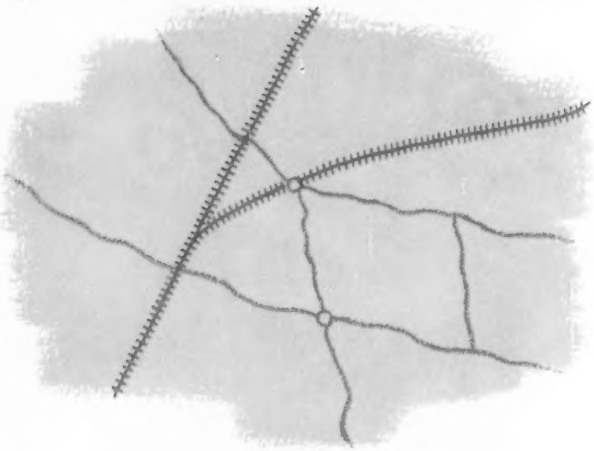
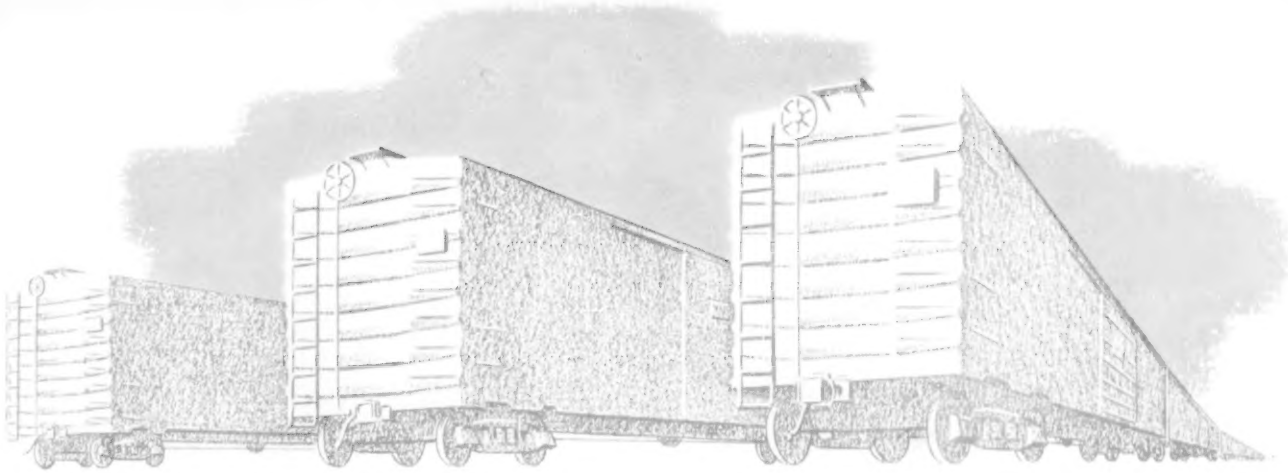




# RATES

# ROUTES

***From the Shippers' viewpoint!***



# ROLLING STOCK

Most shippers compare rates, routes and rolling stock before deciding to buy service.

Railroad sales experience shows that the condition of the rolling stock (and availability of specialized cars) has a strong influence on a shipper's buying decisions.

Experience also shows that old equipment often causes dangerous discontent of shippers. Criticisms that cannot be answered because they're seldom voiced. Discontent that has frequently lost important business.

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**The Industrial Brownhoist heavy-duty Diesel electric full revolving pile driver illustrated here is the first ever built. Maximum leader load is 26,000 lbs. Reach is 34' 1" from center of rotation and 20' 6" ahead of the front axle. Power battering leaders 50 feet long have a batter of 3 inches per foot. The leaders can be raised to driving position or lowered to traveling position in just one minute. Top travel speed is 20 m.p.h. with a maximum drawbar pull of 21,000 lbs. It can haul its own work train and is equipped with air brakes for braking the driver as well as the cars it is hauling.**

**Brownhoist also builds Diesel Electric Locomotive-Cranes in capacities from 25 tons up, Railroad Wrecking Cranes in capacities to 250 tons, boat unloaders, traveling bridge cranes, fast plants and other special equipment for handling bulk materials fast and efficiently in mines, railroads, docks and large manufacturing plants. For complete information about Brownhoist equipment to speed up your heavy materials handling, consult your nearest Brownhoist representative or write us today.**

ANOTHER ADDITION TO THE FAMOUS BROWNHOIST FAMILY OF HEAVY-DUTY, TIME-SAVING EQUIPMENT

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**INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, MICHIGAN • DISTRICT OFFICES: New York, Philadelphia, Cleveland, Chicago, San Francisco, Montreal • AGENCIES: Detroit, Birmingham, Houston**

# $250,000 research laboratory dedicated
## to solution of the hotbox problem

Renewed effort is being put into the fight on the costly hotbox problem. Spurred on by the insistence of the railroads for better performance of journal bearings, National Bearing Division of American Brake Shoe has put into operation a new $250,000 research laboratory to make exhaustive studies of the problem. The new facility is located at Mahwah, New Jersey.

Brake Shoe's reputation for research, especially in the railroad field, is well known. Its first efforts date back many years to the time its principal products were brake shoes, car wheels, journal bearings and trackwork. This new research project is in keeping with the company's desire to maintain the quality and reliability of its products as well as to be of service to the railroad industry.

### Lubrication a major problem

Railroad men—both in research and at the operating level—have long recognized that where adequate quantities of clean oil are carried to the bearing surface, the solid journal bearing is an efficient and practical device. Starting with this knowledge, studies are being made to determine weaknesses in present methods of lubrication as well as explore new methods.

### History of hotbox recorded

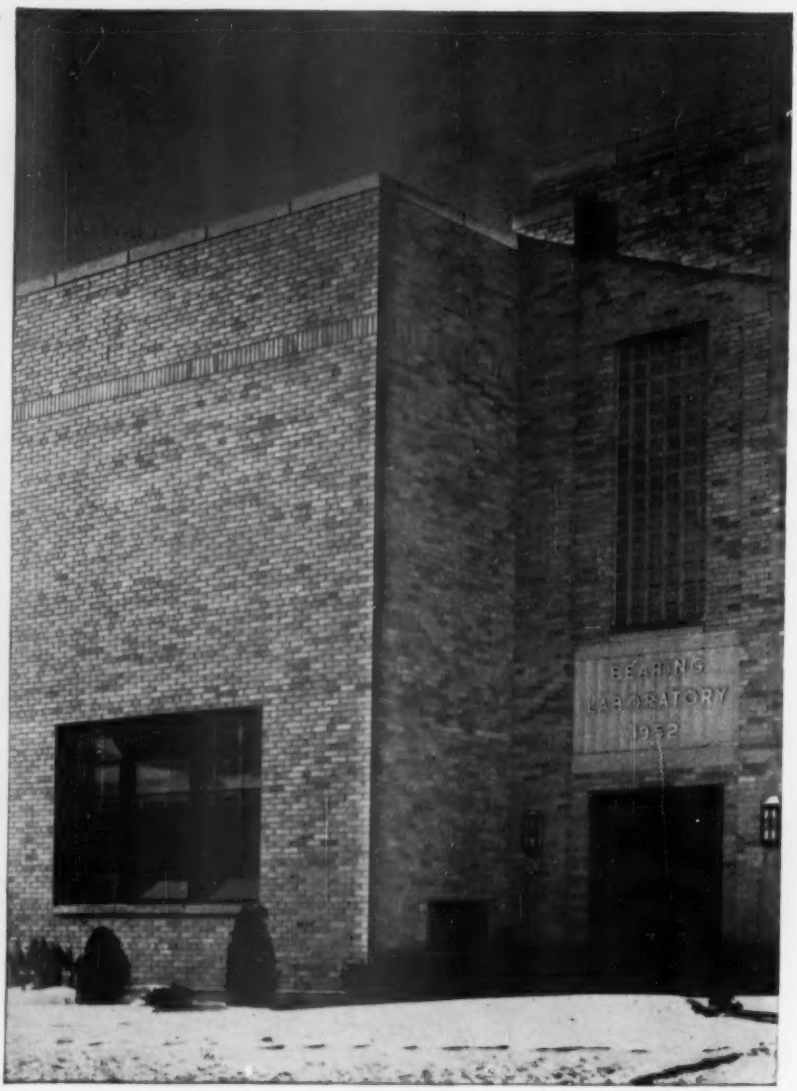
Tests on actual freight cars in operation are slow and data difficult to gather. Now, under controlled laboratory conditions, accurate histories of hotboxes are being charted. A specially built bearing test machine accurately tells just what happens inside the journal box at all different speeds and loads, and under various conditions.

### Speed-load studies among first

With these unmatched facilities, National Bearing engineers can simulate actual car loading. A loaded freight car weighing in at 80 tons (far above average) would place about 18,850 pounds of weight on each of its eight bearings. To duplicate this in the laboratory, each bearing is saddled with a pendulum extending 20 feet below the test room and is capable of being loaded up to 20,000 pounds. Intricate controls and accurate recording devices are beginning to tell a story that can only mean improvement.

### Bearings made to fry, freeze

The opening guns are trained on the multiple problem of temperature of the lubricant in the journal box, temperature of the journal bearing and the friction developed. The fact that outside temperature plays a part is obvious. Freight cars on American railroads may be subject to desert heat or arctic cold of northern winters. To simulate any likely operating condition,




*(Advertisement)*

the test room of the laboratory can be dropped to 40 degrees below zero or raised to a scorching 125 degrees.

### Destruction tests planned

By destruction tests under controlled conditions, the engineers are finding out just how much the bearings will take and what causes them to fail. A few hours of such tests reveal results that would take thousands of miles of actual car operation. As new facts are uncovered, improvements will be incorporated into new and more efficient products.

### Periodic reports planned

Graphs and charts of findings are being compiled and interpreted daily. Reports will be coming your way soon . . . reports in the form of improvements to help lick the hotbox problem and lower your operating costs.

If you would like additional information about the new research laboratory, write to National Bearing Division, 4930 Manchester Avenue, St. Louis 10, Missouri.

Scientists dress for the occasion when making sub-zero tests.

Finger-tip control and automatic recording devices insure reliable data.

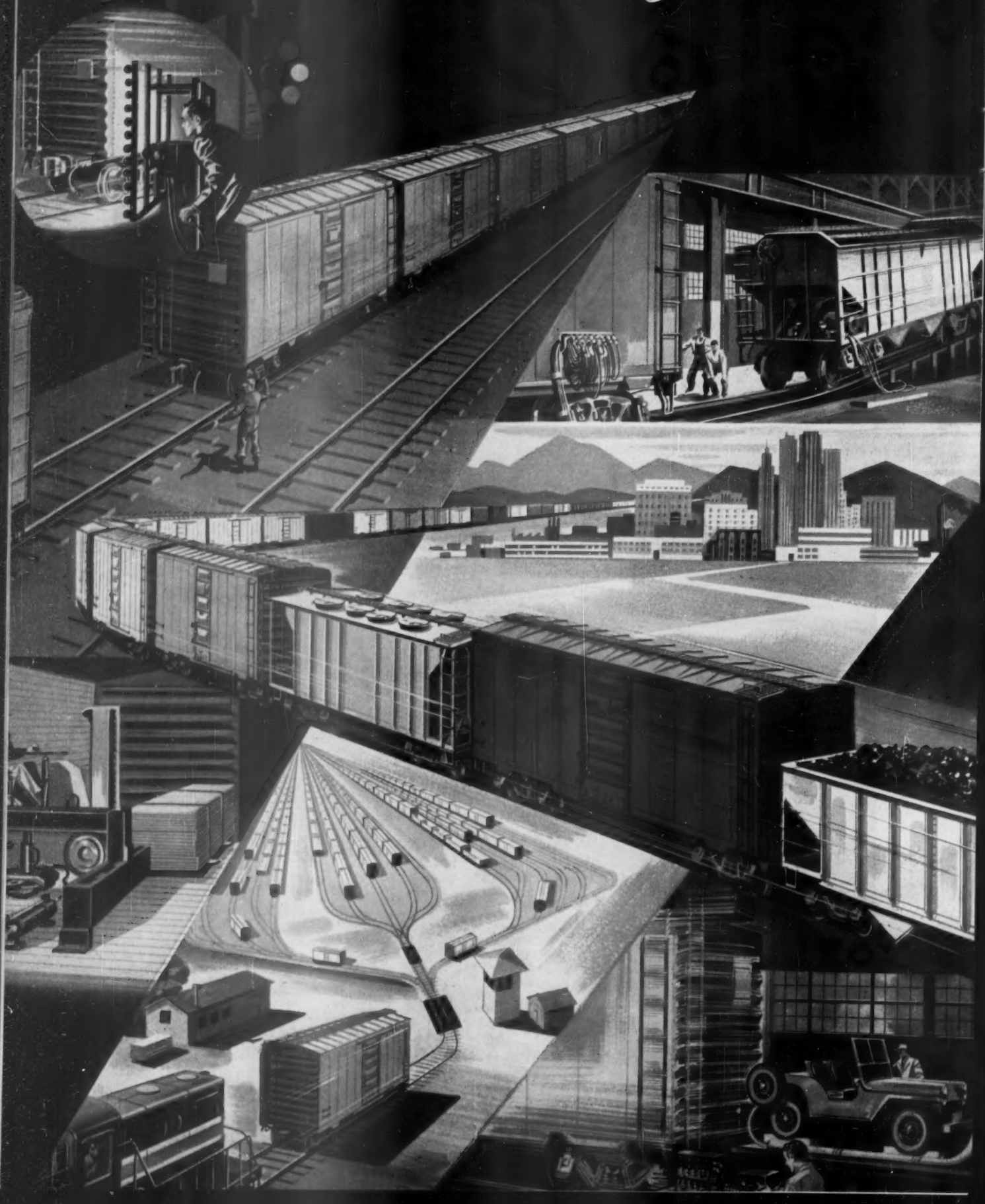
Dead-weight loading pendulums simulate actual loading conditions.

AMERICAN Brake Shoe COMPANY

**NATIONAL BEARING DIVISION**

**4930 Manchester Avenue, St. Louis 10, Mo.**

# *Stamina and economy are born*



# *in a laboratory reproduction*

## *of the*

# GREAT AMERICAN RAILWAY *System*

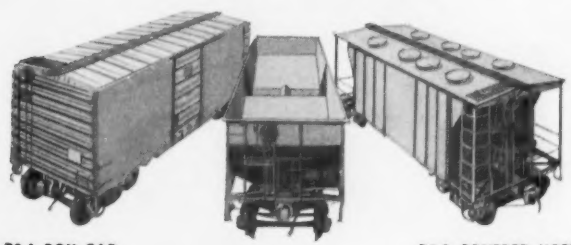
You could, simply by standing in Pullman-Standard's Research and Development Laboratory, give a blow by blow account of the daily life of a freight car operating anywhere on the Great American Railway System.* For here are reproduced the forces created by switching and humping, the vibrations caused by oscillating and shaking and the stresses traceable to heavy loads and shifting ladings.

These and other destructive effects of normal operation are measured by scores of scientific devices such as strain gauges, ocillographs and high speed movie cameras. It is only by means of such data that the clues to design problems can be found, that the cost and weight penalties of construction which exceeds a reasonable safety factor can be avoided.

The stamina and life-time economy of the PS-1 Box Car were created in the laboratory. And the "on line" inspection of representative numbers of the 57,000 now in use, verifies it. The PS-2 Covered Hopper and the PS-3 Hopper Car also have designed- and built-in stamina balanced with economy, as a result of this laboratory reproduction of operating conditions. All three are quality cars built to earn more ton miles of revenue at lower cost per year of service, wherever they are sent.

*A typical box car moves, in one year, on 39 different roads, including two or more trips on 24 roads. (A. A. R. data)

*Built to serve best on the*
**GREAT AMERICAN RAILWAY SYSTEM**



PS-1 BOX CAR

PS-3 HOPPER CAR

PS-2 COVERED HOPPER

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# One of the 160 Uses of CONCRETE on Railroads

NO. 20 OF A SERIES

Adding to the utility and convenience of facilities for the Southern Pacific Railroad this concrete train shed has sheltered passengers since 1914. The precast columns and roof slabs were assembled at the site.

Concrete train sheds are just one of more than 160 uses for portland cement and concrete which enable American railroads to improve service and save time and money. The moderate first cost of such concrete improvements—plus their long life and low maintenance cost—result in ***low annual cost.*** This saves money for other necessary budget items.

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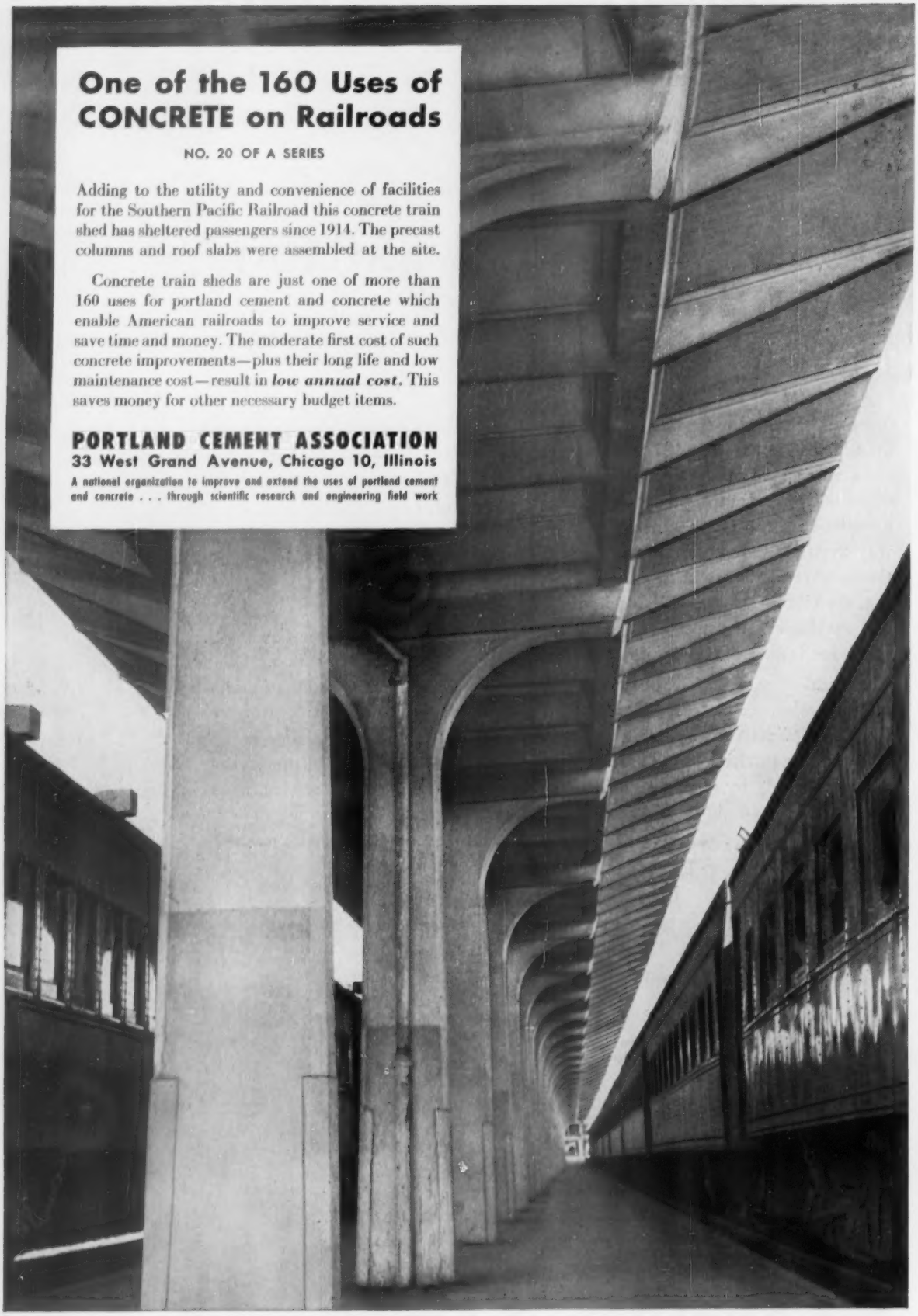

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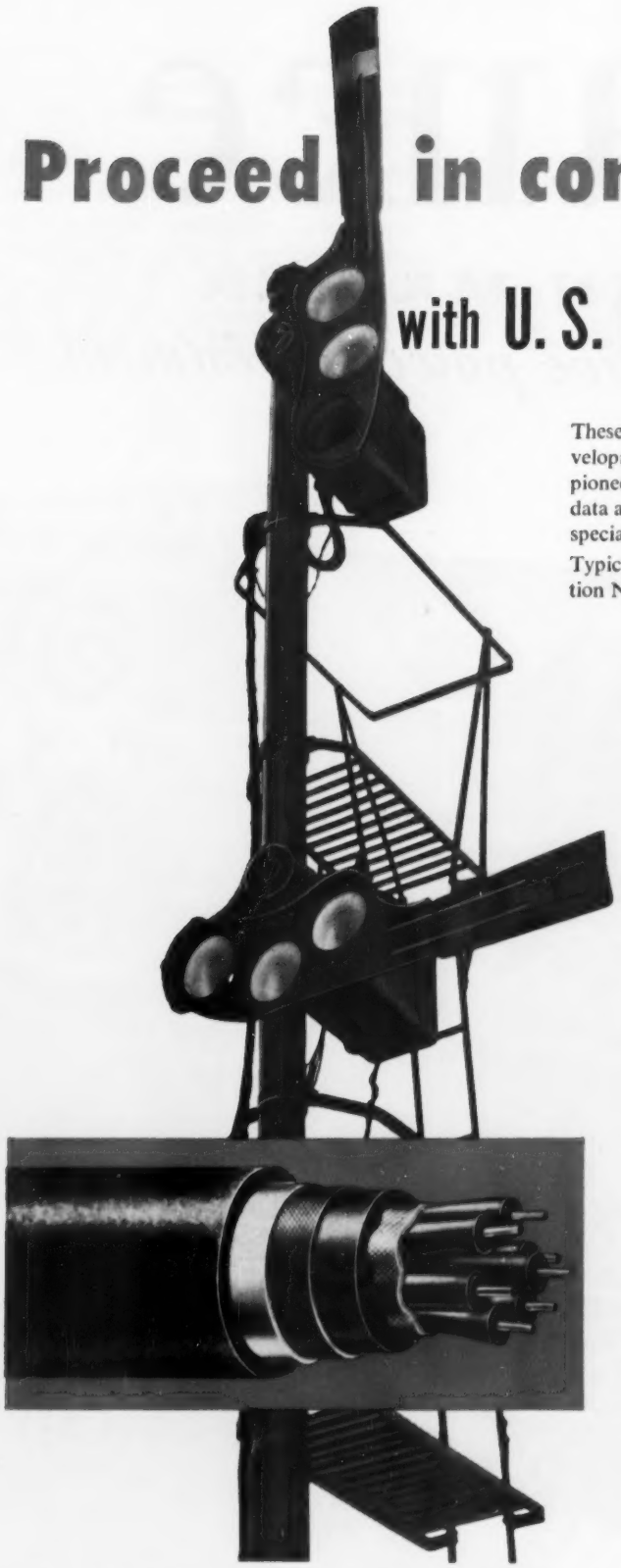

These Cables have all the United States Rubber Company developments that make for positive safety. "U. S." has been a pioneer in insulation for 68 years—has accumulated research data and unmatched experience. Electrical insulation is a "U. S." specialty.

Typical of U. S. Signal Cables for underground use is specification No. 871 embodying the following:

- Solid, annealed coated copper conductor.
- An insulation that is a high heat- and moisture-resistant compound with high insulation resistance and voltage breakdown, as well as low dielectric constant, low transmission loss and low power factor. The thickness of the insulation is .078" for conductor sizes 14 through 8, and .094" for conductor size 6.
- A neoprene jacket is bonded to the insulation, providing it with long-time protection against acids, alkalies, heat, light, oil and mechanical abuse, particularly at the exposed ends. The thickness of this jacket is .020" for conductor sizes 14 through 10, and .030" for conductor sizes 8 and 6.
- Moisture-resistant, non-wicking rubber fillers are used as required.
- A rubber-filled tape providing cushioning for the outer jacket is applied over the assembly.
- An outer jacket made of neoprene is applied over the taped assembly for additional physical and chemical protection.
- A rubber-filled tape is applied over the outer neoprene jacket to serve as bedding for the bronze tape.
- A bronze tape is applied, providing a tough, non-corrosive barrier against rodents, termites and microorganisms.
- The overall protective covering consists of a jute braid weatherproofed and treated with mica for protection of the bronze tape during the installation and in service.

United States Rubber Company is the only electrical wire and cable manufacturer that grows its own natural rubber and makes its own synthetic rubber and plastics. That is why "U. S." gives you the finest in electrical insulation. "U. S." makes all A. A. R. standard types of wires and cables or will design to your exacting specifications. Other "U. S." wires and cables include: Royal Portable Cords and Cables, Underground and Overhead Power, Communication, Railroad Utility, Track Wire, Welding, Locomotive Headlight and Train Control Wires and Cables, etc. Write for specific information.

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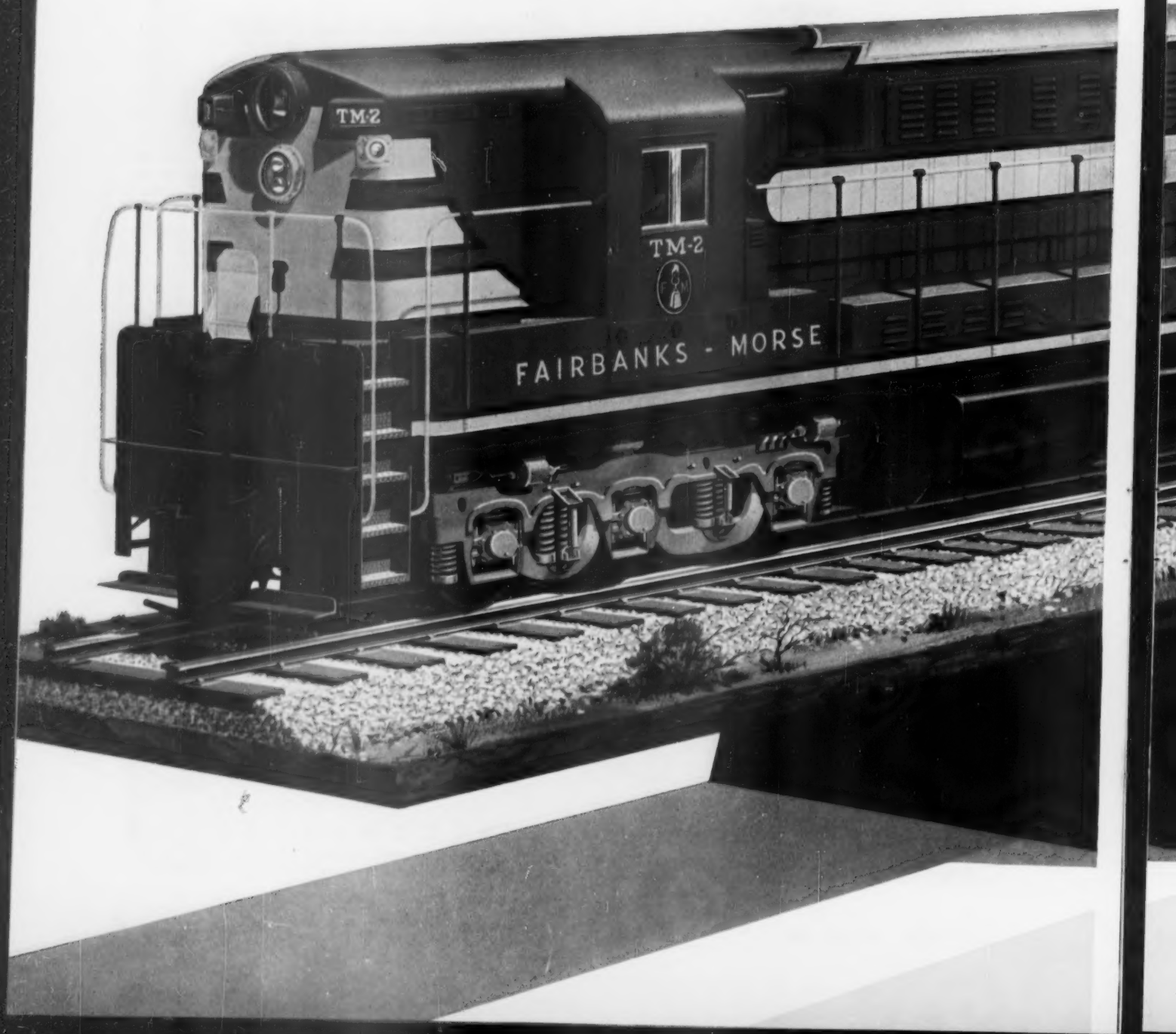

Railroading in itself is a system of balancing the requirements of transportation against the cost of doing the job efficiently . . . economically.

The Fairbanks-Morse Train Master is the first locomotive to fit so completely that industry pattern of balance . . . efficiency . . . economy. For Train Master has the power and versatility that can successfully balance your locomotive mileage for greater operation efficiency.
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### BALANCED DESIGN

TM design stresses balanced placement of components for easy accessibility . . . compactness. You'll find, too, that operating supplies are located near truck centers or other points of low frame deflection for superior weight distribution. Operating supply capacities on the Train Master are higher than on any other motive power unit. This extends the utility and range of TM and also assures greater dependability.

### BALANCED OPERATIONS

An unsurpassed record of operation is now being established the country over by the more than 150,000 horsepower of Train Masters in railroad ownership. TM has proved that it can equal—and surpass—the performance of the power it replaces, and protect all other assignments as well. It is the ability to handle any job efficiently that makes the Train Master the most useful diesel locomotive ever built.

### BALANCED MAINTENANCE

From roof to rail, the Train Master is the easiest and most economical locomotive to maintain. Check the maintenance record of the Train Master power plant—the famous Opposed-Piston engine. The 2400-horsepower O-P—over a four year period—has established a parts cost record of less than one cent a mile in railroad service. Conservatively rated at 200 horsepower per cylinder, the O-P engine has not been rerated since it first entered railroad service. Notice maximum accessibility of components. Truck assembly, for example... springs and snubbers outboard for easy inspection . . . brake shoes that you can see, touch and change at ground level.

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**LOW CONDUCTIVITY** . . . Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity —.25 btu per square foot, per hour, per degree F., per inch thick.

**LIGHT WEIGHT** . . . Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

**PERMANENT** . . . Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

**EASY TO INSTALL** . . . Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

**COMPLETE RANGE** . . . STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings available.

**HIGH SALVAGE VALUE** . . . The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

. . . because TIME has yet to destroy or impair the high insulating efficiency of STREAMLITE HAIRINSUL.

Even after 20 or more years of service, STREAMLITE HAIRINSUL has been removed from refrigerator cars and reused in new cars without need for further processing or renovating.

STREAMLITE HAIRINSUL, the all-hair insulation that actually weighs 40% less and gives so much more in efficiency and economy is a one-time investment.

At left are still more reasons why leading car builders demand STREAMLITE HAIRINSUL. Write for complete data.

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SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED

# TYPE F COUPLER & YOKE

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## DESIGN FEATURES

1. New Safety Shelf—to support mated coupler in event of pullout.
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8. Coupler, Yoke, Follower, and Striker interchangeable as a group with present standards.

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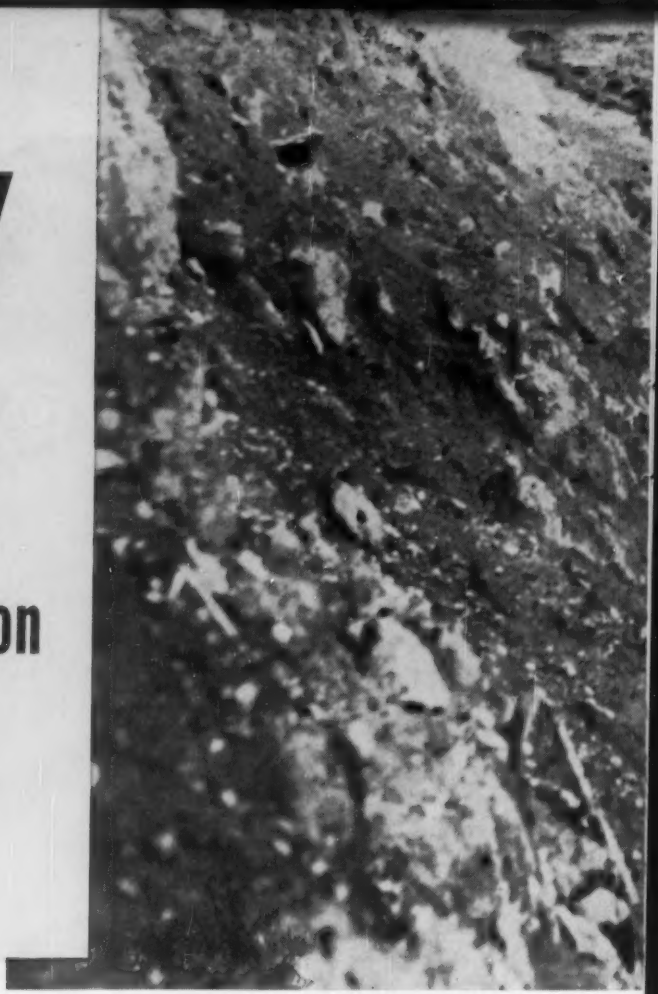
## speeds railroad construction

## in Sicily



Power-proportioning differential automatically transfers up to 4 times more power to wheel on firmest footing. Big low-pressure tires provide ample traction, flotation for hauling through rain-soaked material.

On railroads the world over, D Tournapulls are speeding both major construction and right-of-way maintenance. With their short 12'8" turn radius, these "one-man work crews" are ideal for work in restricted quarters. The units self-load for small yardage maintenance assignments. They can be pusher-loaded on production operations, and are easily loaded by shovel, dragline or hopper. Big low-pressure tires cross or follow tracks without damage to rails, ties or switches.

A typical example is shown in Sicily, where the Government of Italy is building a 20-mile railroad to improve transportation between the seaport city of Gela and the inland trading center of Caltagirone. All earthmoving here is being handled by Mario and George Franchetti Bros. of Rome. Their 2 D Tournapulls are helping move 740,000 cubic yards of earth to level hills, fill valleys, and build bridge approaches. Each of these high-speed units loads, hauls and spreads 48 cubic yards of sandy clay per hour over hauls which average 3300 ft. one-way. They have worked steadily for a year, despite rains from November to March which made the clay very sticky, and hot dry weather from April to October which made it extremely hard.

### Performance earns repeat order

"We are so pleased with these first 2 units," says Partner George Franchetti, "that we have decided to confirm our order for a third."

"The Tournapulls have performed very well and have given me the greatest satisfaction," says Foreman Eugenio Petronari. "These machines are producing economically the many cubic yards I demand daily from our operators and equipment."

Self-loading 6 cubic yards of wet clay containing a small amount of sand and gravel takes about one minute. When push-loaded with 70 hp crawler-tractor, Tournapull load time is reduced to 35 seconds.

Operator Maganuco Salvatore agrees. "I have been operating many different types of equipment," he says, "but this is the first machine that has produced as many cubic yards per day as the foreman has requested. Tournapull is easy to operate and easy to maintain. It does not tire me out. It keeps me interested in the job."

**One-man dirtmovers**

Each of these 7-yd. Tournapulls can work as a one-man earth-moving crew. They drive anywhere via road or right-of-way at speeds to 28 mph. They dig, haul, and spread material without interference from rail traffic. Push-loading in groups of 2 or more they become production tools for construction projects. Ask us for job reports on American Railroads.

Operator handles scraper functions and steering with simple, fingertip electric switches. Control system is so simple that men can be trained to become good operators in a few hours.

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**RAILROAD RATE COMMITTEES OF THE UNITED STATES. Available from E. H. Gaiennie, vice-president—traffic, Toledo, Peoria & Western, 2000 East Washington st., East Peoria, Ill., or from any TP&W office.**

The TP&W announces that the 1954 edition of this directory is now off the press. An added feature in this edition is a list of meeting dates for those committees having regularly scheduled meetings.

•

**THE SIGNS OF LIFE PROGRAM. 12 pages. National Safety Council, 425 N. Michigan ave., Chicago 11. Free.**

The Signs of Life Program—the railroads' special contribution to the national effort to reduce highway accidents—has now completed its sixth year. It is the only public service program of national scope that deals with safety at highway-rail intersections. This report discusses accomplishments of the program, together with plans for increased activity in the future.

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**RAIL ODDITIES; ODD AND INTERESTING FACTS ABOUT THE RAILROADS. 30 pages, illustrations. Association of American Railroads, Transportation bldg., Washington 6, D.C. Free.**

The AAR has incorporated in this booklet selected items from its series of monthly Rail Oddities cartoons which it has been issuing since 1940.

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**PRELIMINARY ABSTRACT OF RAILWAY STATISTICS FOR THE YEAR ENDED DECEMBER 31, 1952. 50 pages. Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Available from Government Printing Office, Washington 25, D.C. 55 cents.**

Contains preliminary statistics for 1952 for Class I line-haul railways, Class I switching and terminal companies, the Railway Express Agency, and the Pullman Company.

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**STATISTICS OF CLASS I MOTOR CARRIERS FOR THE YEAR ENDED DECEMBER 31, 1951. 91 pages. Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Available from Government Printing Office, Washington 25, D.C. $1.**

Contains financial and operating statistics of motor carriers of property and passengers filing annual reports with the ICC.

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**RAILROAD PHOTOGRAPHS OLD AND NEW. 15 pages. Association of American Railroads,**


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*Charlotte 1 — 120 W. Morehead St.
Charlotte 6-4886
Durham — 303 South Duke Street
Durham F-113 • **L. A. Shaw**
Rocky Mount 3 — 761 Planters Street
Rocky Mount 2-5171 • **L. A. Shaw**
Winston-Salem 1 — 955-59 Brookstown Ave.
Winston-Salem 4-2461 • **J. W. Van Dersten**

**OHIO**
Akron 9 — 185 Carroll St.
Jefferson 4-4143 • **G. L. Call**
*Cincinnati 14 — 115-129 W. McMicken Ave.
Main 0600 • **L. J. Morrissey**
*Cleveland 14 — 1010 Rockwell Ave.
Cherry 1-1360 • **A. C. Schwager**
Columbus 15 — Third & Chestnut Sts.
Fletcher 4811 • **T. E. Mahan**
Dayton 2 — 332-42 West Monument Ave.
Michigan 5665 • **A. J. Fischer**
Portsmouth — 923 Washington Street
Portsmouth 2-3631 • **J. T. Young**
Toledo 2 — 1700 Canton Street
Main 9166 • **A. W. Hallett**
Youngstown 1 — 602 West Rayen Ave.
Youngstown 4-0124 • **J. T. Baker**

**OKLAHOMA**
Oklahoma City — 12 E. California St.
Oklahoma City 3-9351 • **W. A. Arthur**
Tulsa 4 — 2406 E. 12th St.
Tulsa 6-1151 • **F. L. Cummings**

**OREGON**
Eugene — 2180 6th Ave. West
Eugene 4-2224 • **H. O. Colburn**
*Portland 9 — Park & Flanders Sts.
Broadway 6641 • **Marvin Peck**

**PENNSYLVANIA**
Allentown — 1941 Hamilton Street
Allentown 4-9341
Bethlehem 1-0657 • **W. L. Hall**
Harrisburg — 1039 S. Thirteenth St.
Harrisburg 5-7303 • **W. H. Naudascher**
*Philadelphia 7 — 910 Cherry St.
Walnut 2-5405 • **T. E. Laughlin**
**D. M. Antrim**
*Pittsburgh 12 — 900 Ridge [illegible]
Allegheny 1-4100 • **P. Fitzorca**
**N. Drake**
Reading — 22 South Third Street
Reading 6-1581 • **J. W. Riddell**

**RHODE ISLAND**
Providence 3 — 194-196 Richmond St.
Dexter 1-8100 • **T. A. Purcell**

**SOUTH CAROLINA**
Columbia — 710 Lady St.
Columbia 2-2125 • **J. H. Littleton, Jr.**

**SOUTH DAKOTA**
Sioux Falls — 300 N. Phillips Ave.
Sioux Falls 4-5621 • **R. K. Jenson**

**TENNESSEE**
*Bristol — 536 Anderson Street
South 4415 • **R. L. Coward**
**J. R. Crang**
*Chattanooga 4 — 210 N. Highland Park Ave.
Chattanooga 6-5624 • **J. R. Feeney**
Knoxville 30 — Henley St. & Union Ave.
Knoxville 3-6171 • **C. C. McGraw**
Memphis 3 — 484 South Front Street
Memphis 37-3421 • **W. J. Berry**
*Nashville 3 — 125 16th Ave. No.
Nashville 6-7161 • **Herschel Hall**

**TEXAS**
Abilene — 1601 South Treadway
Abilene 2-2861 • **E. L. Preston**
*Amarillo — 601 E. 2nd Ave.
Amarillo 2-6778 • **L. P. Bell**
Austin — 214 E. 3rd Street
Austin 8-5674 • **George W. Cox**
Beaumont — 1070 Fannin Street
Beaumont 2-8484 • **L. A. Haley**
Corpus Christi — 1311 Agnes Street
Corpus Christi 4-6374 • **R. E. Broyles**
*Dallas 1 — 717 Latimer St.
Randolph 6454 • **E. E. Reynolds**
El Paso — 427 West San Antonio St.
El Paso 3-7561 • **C. Newbill**
*Fort Worth 7 — 1107 Foch St.
Edison 4523 • **Vernon Young**
*Houston 3 — 1702 Cullen Blvd.
Atwood 8-4571 • **G. H. Simpson**
San Antonio 8 — 1401 N. Hackberry St.
Fannin 6274 • **J. Emmett House**

**UTAH**
*Salt Lake City 13 — 336 N. 3rd West St.
Salt Lake City 9-8871 • **R. H. Lee**

**VIRGINIA**
*Norfolk 1 — 333 West 21st Street
Norfolk 2-2727 • **John Horne**
**T. A. Young**
*Richmond 19 — 10 S. 6th St.
Richmond 7-3491 • **E. C. Toms**
*Roanoke 5 — 601 Salem Ave.
Roanoke 3-3615 • **W. E. James**

**WASHINGTON**
*Seattle 4 — King & Occidental Sts.
Mutual 0123 • **E. C. McEachron**
Spokane 8 — 152 South Post St.
Riverside 3151 • **W. A. Sparks**
*Tacoma 1 — 2112 A Street
Main 0166 • **R. J. Franzen**

**WEST VIRGINIA**
Charleston — 600 Chamber of Commerce Bldg.
Charleston 6-0411 • **J. S. Wilkin**

**WISCONSIN**
Green Bay — 1140 North Irwin Avenue
Howard 5600 • **John Peterson**
Madison 5 — 103 North Park Street
Madison 5-0005 • **F. B. Reynolds**
Milwaukee 2 — 180 N. Jefferson St.
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***100,000 electrical items are distributed THROUGHOUT THE NATION . . .***

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**OFFICES AND WAREHOUSES IN OVER 110 PRINCIPAL CITIES**


Transportation bldg., Washington 6, D.C. Free.

This booklet has been prepared for writers, editors, publishers, layout men, commercial artists, television producers and others who may have need of photographs to illustrate material concerning America's railroads and their daily work. It contains representative samples of a collection of some 15,000 8 x 10-in. glossy prints, maintained by the AAR Public Relations Department.

## CHART

**TANK CAR ANATOMY. 42 in. by 32 in. Printed on plastic. General American Transportation Corporation, 135 So. LaSalle st., Chicago 90.**

Designed to be hung on a wall, kept under glass on a desk top, or placed in a reference file, this chart includes 15 schematic drawings of tank cars or parts of tank cars, from trucks and brake beams to various types of top and bottom unloading arrangements. A sketch map of the United States, showing GATX terminals, shops and offices, also is included.

## FILMS

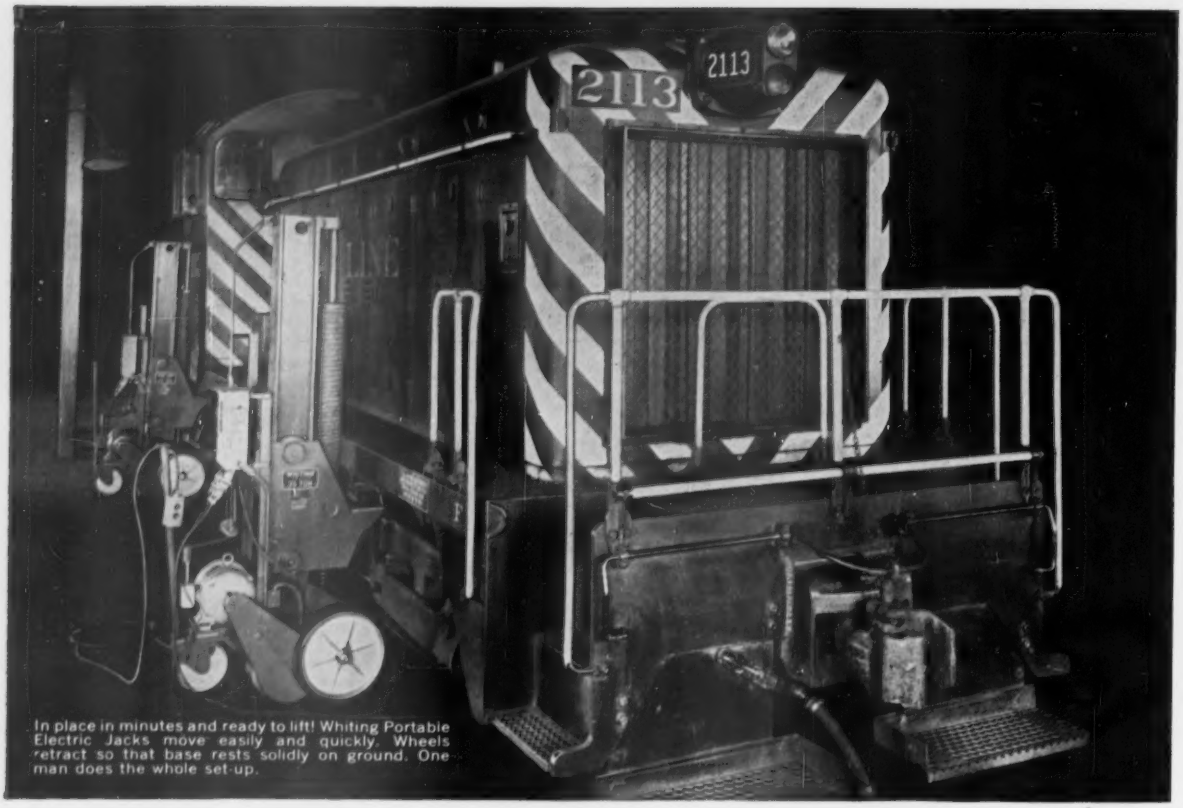
**COMING OUT OF THE WOODS. 16-mm, 20-min, sound, color. Timber Engineering Company, 1319 Eighteenth st., N.W., Washington 6, D.C. Available on loan from Bray Studios, Inc., 729 Seventh ave., New York 19.**

Extending the service life of crossties, objective of the railroad and lumber industries' cooperative research projects at the TECO laboratory, is a feature of this new film, just released by Timber Engineering Company, research affiliate of National Lumber Manufacturers Association. Included are scenes of the TECO laboratory's work in developing the new combined seasoning and treating process for conditioning freshly cut cross-ties, for track service, in a few hours instead of months. Also shown are tie coating tests, and the rolling load machine that simulates years of track service in a few days.

•

**OVER-THE-LOAD MATERIALS HANDLING. 25-min, 16-mm, sound. Clark Equipment Company, Battle Creek, Mich.**

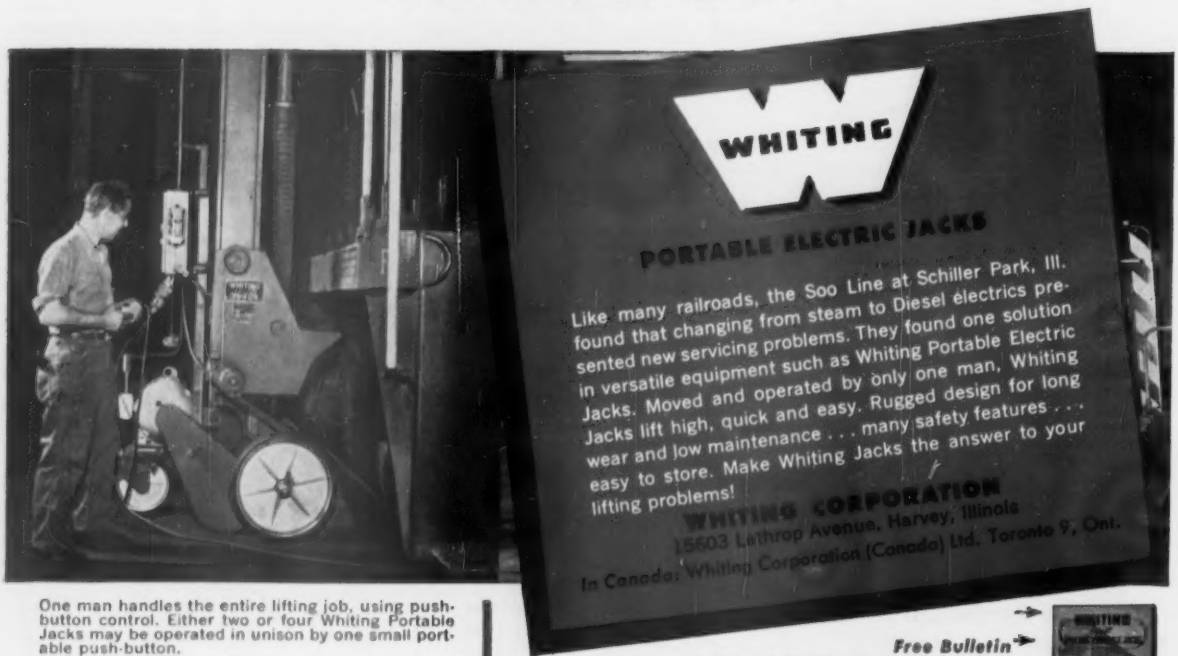
Applications of the straddle carrier type of industrial truck in various industries are portrayed in this film. The straddle carrier differs from other types of materials-handling equipment in that it travels "over the load" and "over the road." As a result, it can carry much heavier loads farther and faster than conventional materials-handling equipment, such as fork trucks. The film shows straddle carriers in capacities ranging from 10,000-45,000 lb traveling through city streets and over highways.




In place in minutes and ready to lift! Whiting Portable Electric Jacks move easily and quickly. Wheels retract so that base rests solidly on ground. One man does the whole set-up.

# A ONE-MAN LIFT TELLS A TWO-SIDED STORY

## at the SOO LINE SHOPS



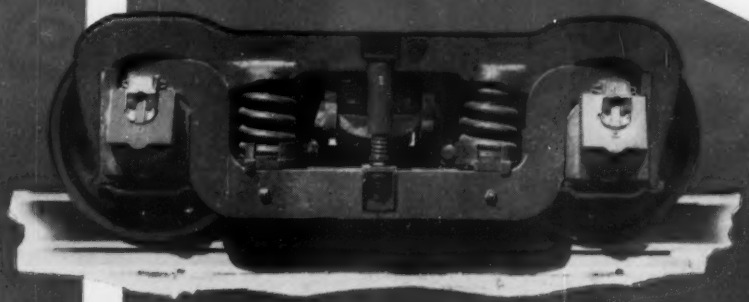

One man handles the entire lifting job, using push-button control. Either two or four Whiting Portable Jacks may be operated in unison by one small portable push-button.

**Free Bulletin**

Bulletin PJC-402 tells all about Whiting Portable Jacks. Write today for your copy!


Southern Pacific Box-Express Car
with latest type Commonwealth BX Trucks

# *Latest Type* COMMONWEALTH BOX-EXPRESS CAR TRUCKS



## Offer Many Advantages For Commodity Cars In Passenger Train Operation . . .

Especially designed to meet the demand for a safe, rugged, practical, light-weight truck for Box-Express Cars operating in passenger trains, this newest type COMMONWEALTH Equalized Swing-Motion Truck provides a *smoother riding car* with greatly reduced upkeep costs.

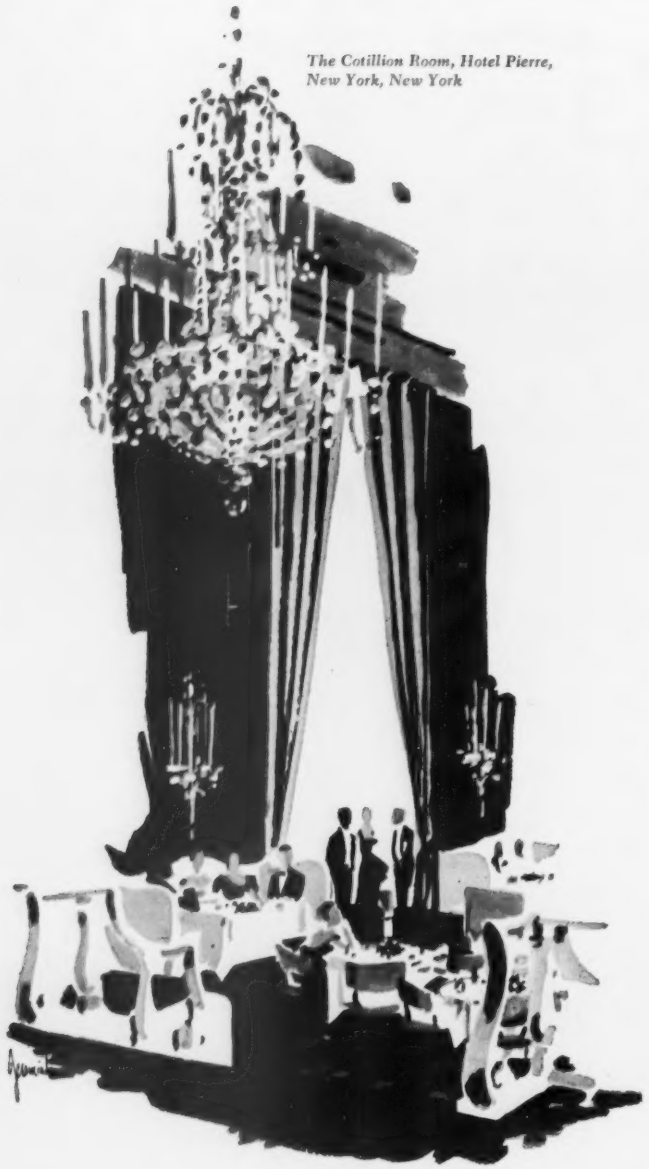
The swing bolster arrangement permits effective lateral control, assuring smoother riding with *less shock and damage to car contents*, car body and track structure. The one-piece cast steel truck frame, with integral pedestals machined, insures that the axles are kept in tram at all times, which is most desirable whether plain bearings or roller bearings are used. The COMMONWEALTH Trucks may be arranged for either disc or single shoe type brakes.

For true economy and dependability it will pay you to apply COMMONWEALTH BX Trucks to your express, refrigerator and merchandise cars in passenger train service.

**GENERAL STEEL CASTINGS**

GRANITE CITY, ILL. • EDDYSTONE, PA.

**NOTHING REFLECTS AN ATMOSPHERE OF FINE SERVICE BETTER THAN SIMTEX NAPERY...**



*The Cotillion Room, Hotel Pierre, New York, New York*

**from Simtex alone . . .**
**and at no increase in price . . .**
**table napery woven**
**entirely of Combed cotton**

As you know, only superior quality, long-staple yarns *can* be combed. The combing process removes all short fibers, impurities—permits a noticeably smoother, stronger fabric than is possible with ordinary yarns. Now, without change in its famous construction, Simtex table napery assures:

- Richer, lasting luster
- Smoother, more luxurious texture
- Finer yet stronger fabric
- Longer life, greater resistance to wear
- Handsomer looks, sustained through countless launderings
- Greater economy, with fewer replacements needed

Simtex napery stays fresh longer, too, thanks to Simtex exclusive permanent finish.

**Simtex** MILLS, DIVISION OF SIMMONS CO., 40 WORTH STREET, NEW YORK 13, N. Y.

# KEEP FREIGHT MOVING, WITH NO COSTLY DELAYS

## ...use dependable Exide-Ironclad battery power!

**SUCCESSFUL, SMOOTH** freight movements depend on equipment always ready to roll. Exide-Ironclad diesel starting batteries insure quick breakaway and fast acceleration of engine to firing speed. They respond instantly to all power demands made—large or small, continuous or intermittent. There is always a reserve of power, with positive operation of control equipment guaranteed. In addition, lower costs for operation, maintenance and depreciation make Exide-Ironclad diesel batteries your best power buy—AT ANY PRICE!

**THE POSITIVE PLATES** are the heart of any battery. Only Exide uses a slotted tube construction. By use of tubes, more active material is exposed to the electrolyte, providing *greater power.* Also, more active material is retained, *giving longer working life.*


**DEPENDABLE POWER,** ample reserve power for any diesel need, comes from improved Exide-Ironclads. Prompt delivery. For full details, call your Exide sales engineer—write for Form 4843 (Installation and Maintenance of Diesel Starting Batteries).

**Your best power buy**
**...AT ANY PRICE!**

**Exide®**
**IRONCLAD® BATTERIES**

**Exide INDUSTRIAL DIVISION,** The Electric Storage Battery Company, Philadelphia 2, Pa.

# The Things We're Constantly Looking for Only Your Cost Accountants Really SEE!

## WIX Engineering Sees the Problem of Clean Diesel Oil as a Prime Operation Cost!

Reducing your "down-time" and major overhauls, as well as extending lube oil life for Diesels, are the prime targets of WIX Engineered Filtration for railroads. It is in the laboratory where WIX filtration study and research find the improvements and begin to lower costs that ultimately pay off in more economical operation for you.

WIX provides actual "prescription" filtrants for individual engine characteristics and variables in service and climatic conditions. All have been field tested, as well as laboratory tested, and are in wide use by many leading railroads on yard engines, freight and main line locomotives. All are efficient in the removal of micron-sized contaminants, possess inherent resistance to the development of acids, and none disturb the vital additives in modern Diesel lubricants. All filtrants are processed and machined by WIX under precise quality standards from raw material to finished media.

Additionally, these "prescription" filtrants are density packed under electronic control in one piece, precision knitted "sock" Cartridges with many construction features developed by WIX for railroad applications. They guarantee you the utmost in Diesel filtration efficiency, longer life and simplicity of service.

Let WIX work on *your* problems of really CLEAN Diesel oil and fuel . . . the positive results will come in extended oil life, reduced engine "down-time" and show up in economies in your operations cost accounting.

ENGINEERED FILTRATION

- Selection of "Prescription" Filtrants: Cotton Threads, Blended Cotton Threads, Felted Paper.
- Uniform volume, density packed in one-piece Sock. Integral End-Seal or Grip-Seal Cartridge construction.
- Spring-reinforced center tube, slotted for greater, more even flow rates.
- Tin-plated metal parts. Bale-type handles for easy installation and servicing.

ENGINEERED wix FILTRATION

WIX CORPORATION • • • • • GASTONIA · N · C ·

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# 1st with Underwriters' Listing

## CLARK'S L.P.-GAS CARLOADER*

**reduces engine maintenance, eliminates obnoxious exhaust fumes**

**1. Greatly reduces engine maintenance:**

———eliminates unburned carbon deposits and crankcase dilution.

———eliminates fuel pump and complicated carburetor adjustments.

**2. Eliminates obnoxious exhaust fumes:**

———L.P.-Gas provides almost perfect combustion, excellent for indoor operations.

**3. Provides safe, efficient operation:**

———vacuum ignition switch is interlocked with fuel line and manifold, impossible to spill fuel or load-up engine.

———high compression head (8.5 to 1) gives maximum economy and power from high octane L.P. Gas.

———quickly demountable tank takes 3 minutes to change.

———Stellite valves and seats prevent burning from high flame temperature of L.P. Gas.

*4000 lb. capacity, available with standard shift, Hydratork or Dynatork.

Now you can have the advantages of liquified petroleum gas-powered (butane, propane) materials handling, with complete safety. The Clark L.P.G. Carloader is the first lift truck to receive the all-important listing of Underwriters' Laboratories. Field and factory tested for two years, Clark's unit is specifically designed and metered for fork truck operation. For details, call your local Clark dealer, listed under "Trucks, Industrial" in the Yellow Pages. Or send the coupon for specifications.

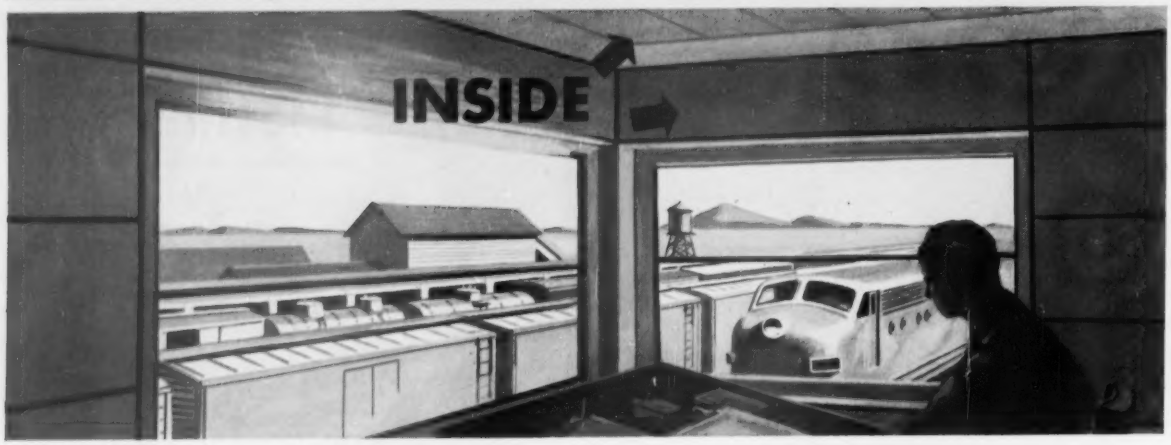
CLARK EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 24, Michigan

☐ Send details on LPG truck

Name_____
Firm_____
Address_____
City_____

# Protect against fire!


## Safeguard roadway structures with long-lasting, maintenance-free J-M ASBESTOS BUILDING MATERIALS

FIGHT FIRE before it starts by safeguarding your signal towers—outside and inside—with these Johns-Manville Building Materials:

**J-M Asbestos Roofing and Siding Shingles**—Two materials that solve the problem of inexpensively fireproofing the exterior of any signal tower, old or new! Made of asbestos and cement, these shingles provide complete protection from communicated fires . . . they are rotproof as well as fireproof, require little, if any, maintenance over the years. Both types can be applied right over the old surfaces on existing structures.

**J-M Asbestos Flexboard®**—For interior fire protection, cover walls and ceilings with this easy-to-apply, asbestos-cement building board. Furnished in large flexible sheets, it is easy to handle, can be nailed and sawed like wood. Yet Flexboard is tough, strong and durable. Its attractive surface requires no painting, is easy to keep clean, stays good looking indefinitely. Equally adaptable to new construction or for fireproofing the interiors of existing towers.

For full details about J-M materials for railway use, write Johns-Manville, Box 60, New York 16, New York.

JM PRODUCTS **Johns-Manville** 96 YEARS OF SERVICE TO TRANSPORTATION

## Letters from Readers

### Mis-Routed "Zephyr"

SALT LAKE CITY, UTAH

TO THE EDITOR:

How do you figure that 2,713-mile route for the "California Zephyr" between Chicago and San Francisco in your recent article on the Santa Fe's new "San Francisco Chief" (*Railway Age*, June 7)?

The mileage should be:

| | |
|---|---|
| Burlington—Chicago to Denver | 1,034 |
| Rio Grande—Denver to Salt Lake City | 570 |
| Western Pacific—Salt Lake City to San Francisco | 928 |
| Total | 2,532 |

This is shorter than the mileage you list for the new "Chief." However, while there have been schedule changes from time to time, the "California Zephyr" is operated more for scenic enjoyment than speed. Perhaps you calculated your Rio Grande mileage via our Royal Gorge route, although, as you know, the "Zephyr" uses the shorter route via Moffat tunnel. The longer route is served by the vista-domed "Royal Gorge," which, while it carries no through cars off the Rio Grande, remains a perennial favorite with scenery-seeking travelers.

While the Santa Fe is indirect competition with our above-mentioned domeliners, I want to wish the best of luck to the new "Chief."

W. J. KIEFER
Fireman, D&RGW

[With no authority from the Rio Grande's operating department, *Railway Age* incorrectly routed the "California Zephyr" via the Royal Gorge line just as Mr. Kiefer states. In addition, we appear to have extended Western Pacific rails right off the end of the Oakland Pier terminal and all the way across San Francisco Bay.—EDITOR.

•

### "Trailroad" Proposed as Substitute for "Piggyback"

CHICAGO, ILL.

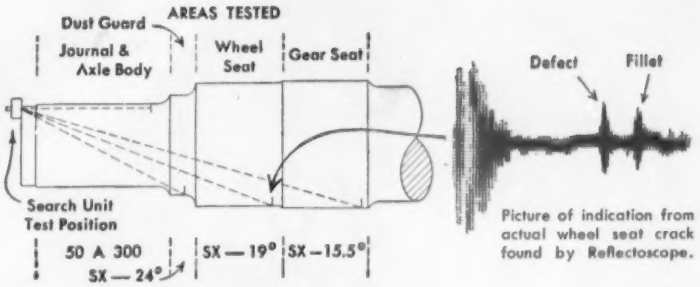
TO THE EDITOR:

In place of the word "Piggyback" or the initials "T.O.F.C." I would like to suggest the use of the word "TRAILROAD," which can describe "Trailroad Service," "Trailroad Cars," "Trailroad Rates," etc.

I am sure all railroad men and shippers will readily understand it is a combination of "Trailers" and "Railroad" and indicates "Trailroad Freight" moves in trailers on the road and also on railroad flat cars.

W. T. AHERN
Chief clerk, CMStP&P


**Now you can detect fatigue cracks in your diesel axles WITHOUT DISASSEMBLY with the Sperry Ultrasonic Reflectoscope**




*Cross section of typical diesel axle showing how the Sperry Reflectoscope with newly designed angle search units inspects all axle critical areas.*

Here is a new, rapid, positive and economical method of inspecting critical areas of diesel axles for fatigue cracks during the lengthened intervals between truck disassemblies.

The Sperry Ultrasonic Reflectoscope, with new and specially designed angle search units, tests all high-stress areas *in place* in a matter of minutes.

One railroad alone has already examined 1000 diesel axles, found *six* that could have produced costly wrecks had they stayed in service to failure. Preventing even one minor accident will pay for the Reflectoscope many times over.

Sperry Ultrasonic inspection can fit easily into your maintenance schedule. For further information or a working demonstration, write or wire us today.

*Under-the-engine* testing of your diesel axles is quick and thorough with the fully portable, highly accurate Reflectoscope.

*Crack in dust guard* fillet area, revealed in place by Reflectoscope, could have caused wreck had it progressed to failure.


Sperry
FIRST IN RAIL TESTING

SPERRY RAIL SERVICE
Division of Sperry Products, Inc.
Danbury, Conn.
New York Chicago St. Louis

# Set them off *easy* with the Westinghouse 6-SL Brake

**NEW MOVIE AVAILABLE**

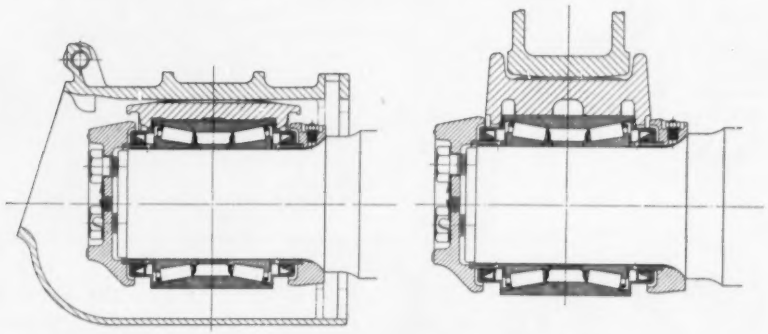
entitled, *"AT THIS MOMENT"*—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

The 6-SL Brake handles easily and responds quickly. With it, you can speed up your switching operations and still protect the lading.

Westinghouse Air Brake
COMPANY

AIR BRAKE DIVISION WILMERDING, PA.

# What's New in Products



**The details of the installation shown above are, left, for the integral box type side frame and, right, for the pedestal type side frame.**

## Interchangeable Freight Car Bearing

**Greater capacity, lower cost, feature new Timken design applicable to many present journal boxes**

The Timken Roller Bearing Company, Canton, Ohio, has just announced a new freight car journal roller bearing application which has been designed: (1) To make available a bearing of increased capacity; (2) to fit into both pedestal and integral frame applications with minor box modifications, thereby permitting a railroad to carry a minimum number of bearing types; and (3) to make such a bearing available at an 18 to 25% reduction in cost, depending on size.

This new roller bearing design makes it unnecessary to have a companion journal box of special design, the assembly being of such nature that it is applicable to existing boxes and to journal boxes in integral truck side frames with slight modifications to the box. Adapters are used with the different applications.

Lending itself to high-speed automatic production, the new freight car journal bearing has been standardized so parts within the bearing application can be interchanged. This is a heavy-duty application suitable for any type of freight car service. It can be used with both integral box type side frames commonly used on existing plain-bearing-equipped freight cars and pedestal-type side frames used on new roller bearing-equipped cars.

The new double-cup freight car application actually is two bearing assemblies together with two seals forming an enclosed unit. This permits the use of larger bearing elements and the possibility of still getting into the same limited space requirements of the integral box type side frame. Because of elimination of the need for a separate journal box, more efficient utilization of metal from the standpoint of bearing capacity is made possible.

This new bearing unit, now available for 5-in. x 9-in., 5½-in. x 10-in., 6-in. x 11-in. and 6½-in. x 12-in. axle journals is assembled and lubricated at the factory before shipment. Provision is made for subsequent lubrication, in service, as conditions require. The bearing unit can be removed from the shipping carton and applied directly to the axle journal by pressing it on.

The present range of available sizes covers requirements for 40-, 50-, 70- and 90-ton capacity cars. The application is designed so the bearing, other than the backing ring and end cap, is reversible, and therefore workmen cannot get the assembly on backwards.

The rubbing type seals used in this design are of the same basic design that has been used in Timken freight car applications for the past four or five years. The seal, as may be seen from the drawings, is contained in an outer member which is press-fitted into the counterbore in each end of the cup, and is replaceable as a unit. The axle for the new Timken freight car application is the standard AAR freight car roller bearing axle, which can be machined from an existing plain bearing axle provided the journal diameter has not been worn down more than 5/16 in. below the original diameter.

Capacity of this new bearing assembly is in the classification of existing heavy duty applications. It is expected that its service life will be approximately three times that of existing cartridge type bearings●

---

### *New 20-Ounce Lantern Fits In Pocket*

A new signal lantern, which weighs only 1¼ lb loaded, and uses either flashlight cells or longer industrial F-cells, is being manufactured by Streamline Products, 1010 Wyandotte st., Kansas City 5, Mo.

The new lantern, Streamline Model C, is 5 in. wide across the handle, 1⅝ in. thick, and 6¾ in. high with handle folded, and is precision made of 22-gage solid brass, heavily nickel plated. It holds two bulbs—broad beam and spot beam—and stores two extras inside. A spot-welded steel guard protects the bulbs and serves as a lantern stand. The brass handle is covered with grooved rubber tubing for easy

grip, while the switch snaps into place, thus preventing the lantern from accidentally turning on •

### Smaller Batteries With More Capacity

A new type of storage battery for electric industrial trucks has been announced by the Edison Storage Battery Division of Thomas A. Edison, Inc., West Orange, N. J. It supplies more capacity relative to size than any Edison nickel-iron-alkaline storage battery heretofore available; and has been developed for use in electric industrial trucks in which space available for the battery is limited—especially trucks of the drive-ride sit-down type.

Designated as the MC-type, the new battery affords a means of supplying most trucks of this type with as much as 25% more capacity than other types of Edison batteries can supply, without changing either steering-wheel or pedal heights.

Cells of the MC-type battery employ standard steel-tube and pocket construction of plates. They are rated at the normal five-hour discharge rate; can be charged at full normal rate; and withstand various electrical accidents in the same manner as other Edison cells.

Initially, the MC cell is being produced in six sizes, MC4, MC5, MC6, MC7, MC8 and MC10, with capacities ranging from 285 amp-hr for MC4 to 710 amp-hr for MC10. Standard assemblies range from 10-cell MC4, rated capacity 3.42 kw-hr to 42-cell MC10, rated capacity 35.78 kw-hr.

When assembled in steel cradles, the MC battery has the same length and width as the C type. Its height is 24⅝ in., compared to 22⅛ in. for the C type, or 2½ in. greater. Thus, when it is substituted for a C type, the battery box need not be lengthened or widened. It may need to be increased in height, but only if its inside clear height is less than 25 in. and thus fails to provide clearance. Lifting ears which turn down when the battery is on the truck are located on the shorter ends of the battery •

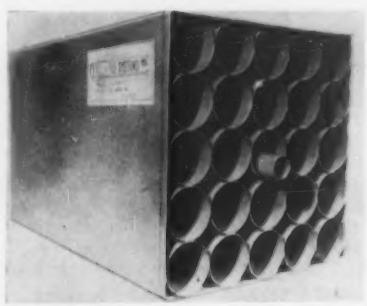

### Non-Metallic Underground Feeder Cable

A new Flamenol Type UF underground feeder cable has been announced by General Electric's Construction Materials Division, Bridgeport 2, Conn. The cable is said to give dependable underground wiring and to be easy to handle and install because of its light weight. It is available with one, two, or three conductors. It is recommended for installation in accordance with Article 339 of the National Electrical Code.

Single conductor cable is available in sizes No. 14 through No. 4 AWG and is listed by Underwriters' Laboratories, Inc., as Type UF. Two and three-conductor cables are available in sizes No. 14, 12 and 10 AWG and are listed as Type UF and Type NMC •


### Step and Handle Combination For Steel and Wood Shelving

"Step-N-Fetch," a step and handle combination for steel and wood shelving, has been announced by Narva Products, Inc., 70 East 45th st., New York 17. The product can be used on all upright supports making it safe and easy to mount a solid step and hold a secure hand grip to reach stock on upper shelving areas. Orderly stockkeeping is permitted and utilization of shelf capacity is said to be increased 25% or more •



### Filing System for Rolled Material

It is now possible to file large layouts and tracings by the "mailing tube method," and yet have the material readily available through use of an index relating to coordinated tubes, with a Multiroll File developed by Roll & File Systems, Inc., P. O. Box 85, Ferndale 20, Mich.

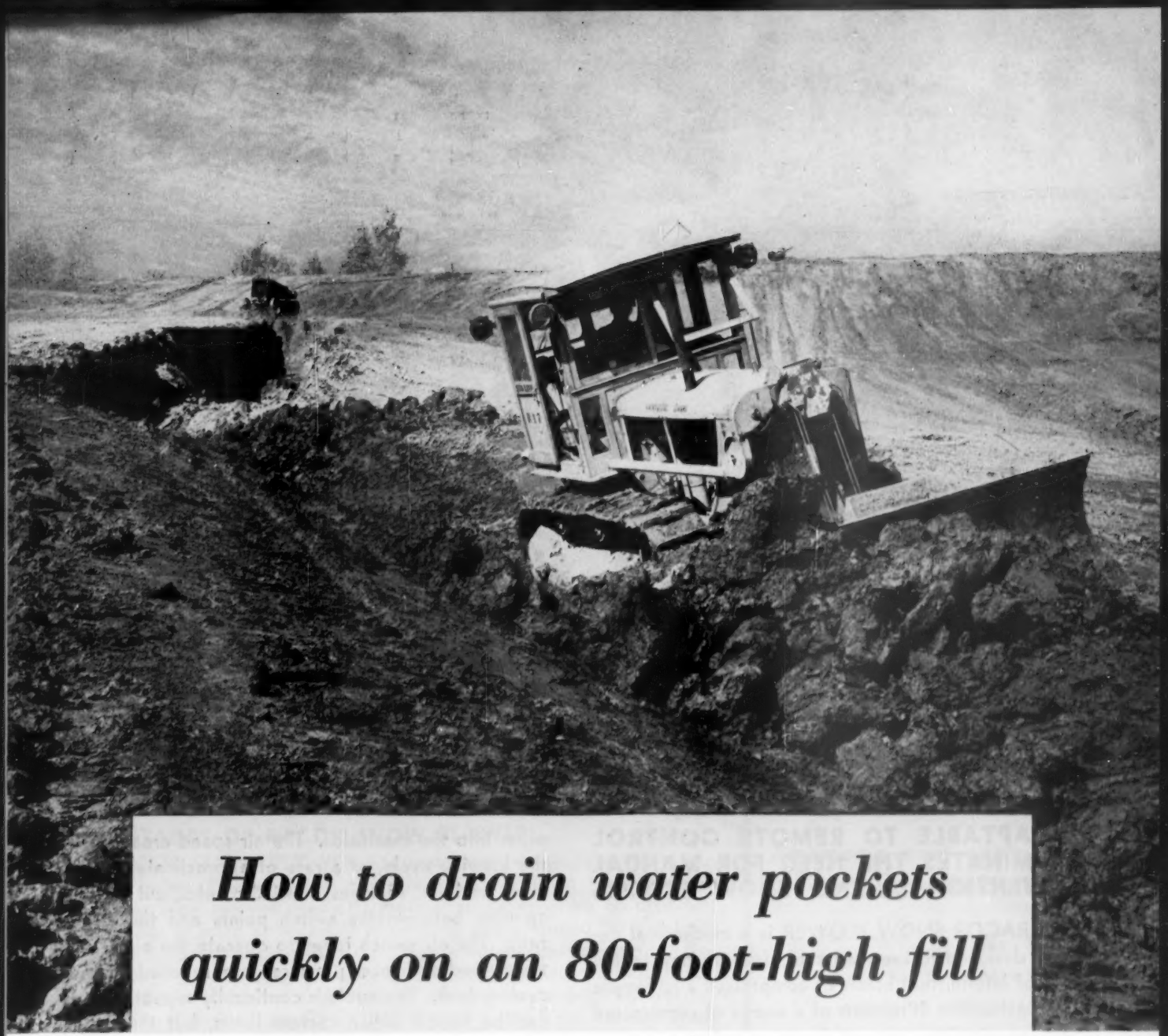
Each Multiroll File unit contains 25 individual tubes of 2½-in. inside diameter encased in a 200 lb-test reinforced corrugated board container. A smaller tube is furnished with each file, around which material to be filed is first rolled. It is then inserted into the file and the rolling tube withdrawn as the filed material expands. Location of material can be recorded on an index form furnished with the file or entered in a card file system. Three models, providing tube lengths of 30, 36 and 42 in. are currently in production •

### Welding Rectifier with Cooling Control

Provision for thermostatic control of cooling water is supplied on a new model, Size B Ignitron (WL-5551-A) available from the Westinghouse Electric Corporation, Pittsburgh, Pa. The control is said to reduce cooling water consumption and provides protection to the tube and associated equipment in case of water failure.

The rectifier is a sealed, stainless-steel jacketed, water-cooled, mercury-pool tube. It is capable of replacing the standard model WL-5551 directly, with the advantage of provision for suitable thermostatic control. The calibrated thermostat, attached to the mount provided on the side of the tube, may be used to stop tube operation in case of insufficient water flow, or may be used with a solenoid water valve to turn cooling water on and off as needed.

The tube is designed primarily for resistance welding control. Two tubes normally used with single-phase welders will control 600 kva at 250 to 600 volts over a 25- to 60-cycle frequency range •



# *How to drain water pockets quickly on an 80-foot-high fill*

Chalk up another use for that versatile off-track unit, the Cat* D6 Tractor with the No. 6S Bulldozer. The Soo Line Railroad has found it to be one answer to shifting roadbeds.

Sixteen miles west of Superior, Wisconsin, vertical test drilling indicated water 30 feet below the roadbed on an 80-foot-high fill. Horizontal shafts drilled at the 30-foot level drained the trapped water. Then the powerful D6 'dozed out leads and channels to the drainage stream below the fill.

The road also uses this unit to widen out and slope right-of-way.

A close look at the No. 6S Bulldozer explains why so many railroads use it for off-track work. The moldboard is engineered to roll the earth forward and hold large loads on the blade. The blade itself is extra strong. A four-box section reinforcement runs its entire length for rigidity. And it's made of high carbon steel for longer wear. How does it handle from the operator's seat? Easily—and visibility is excellent. What's more, it can be both tilted and tipped by one man. These and many other features contribute to this rig's ability to deliver big production at low cost!

Your Caterpillar Dealer is a convenient source of genuine parts, so you don't have to carry a large inventory. He's nearby. Why not call him today and find out how the use of rugged yellow machines on off-track policing can pay off for you? He'll be glad to demonstrate!

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

**CATERPILLAR***

*Both Cat and Caterpillar are registered trademarks—®

# THE RACOR Snow Blower

(Patent Pending)

## EASY, SAFE AND ECONOMICAL SNOW REMOVAL FROM SWITCHES BY COMPRESSED AIR

*Easy to Install • Easy to Maintain • Safe and Economical to Operate*

### ADAPTABLE TO REMOTE CONTROL ELIMINATES THE NEED FOR MANUAL ATTENTION DURING SNOW STORMS

The RACOR SNOW BLOWER is a mechanical device designed to keep switches clear of snow by the use of intermittent blasts of compressed air. Simple in construction, it consists of a source of compressed air, an air filter, an anti-freeze injector, a cycling tank, an air switch, an air valve and two manifolds equipped with adjustable nozzles.

### SOURCE OF AIR SUPPLY

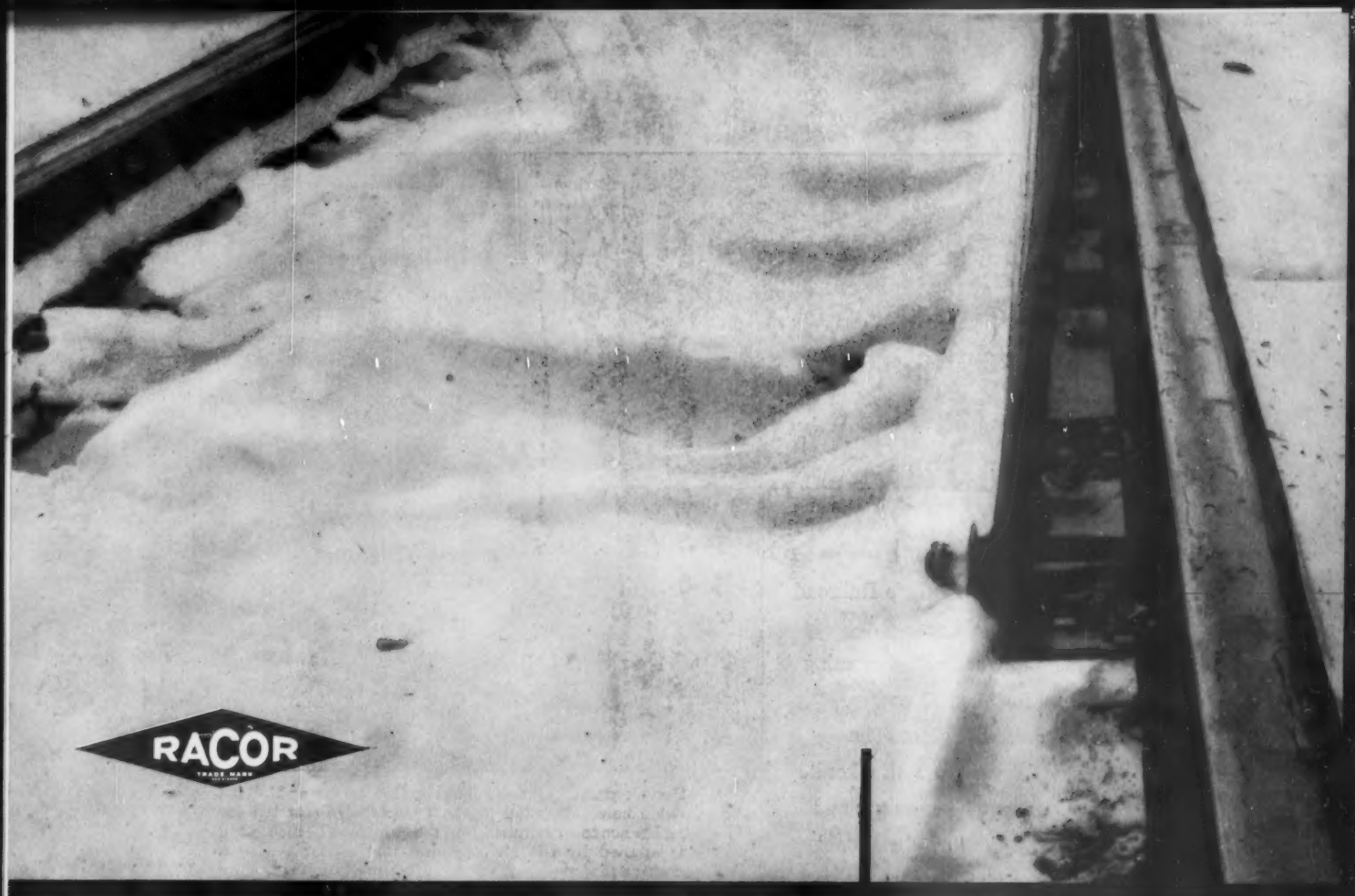
The compressed air can be supplied either from a small individual compressor for a particular switch or from a larger compressor with sufficient capacity to serve several switches; or from a central source of supply. The manifolds are attached to the stock rails of switches in such a manner that there is no interference when the switch points are thrown.

### HOW IT WORKS

The air passes through the filter, the anti-freeze injector, the cycling tank and then through connecting pipes into the manifolds. The air speed created by the blowing cycle, at a rate of approximately sixty miles an hour, removes snow, dirt, etc., out of the opening between the switch points and the stock rails. The air switch is set to operate the air valve when predetermined pressures are reached in the cycling tank. This cycle is continually repeated and can be varied within certain limits, but the usual cycle develops a blowing time of about one-tenth of the time of the cycle — the blowing taking about four seconds with the cycling tank re-charging in about thirty-six seconds. This timing was found to be adequate to keep a switch clear of snow during a total snowfall of 64½" in six days, with an air supply of approximately 100 p.s.i.

Electric cycling can be substituted for pneumatic cycling by using an electric timing device that controls a solenoid valve. This timing device, when employed, is connected directly to the air supply and will eliminate the use of the cycling tank.

RACOR engineers will gladly recommend the type of cycling best suited for any particular location.




## ADVANTAGES OF RACOR SNOW BLOWER

The RACOR SNOW BLOWER has many advantages, the more important being: *Extremely low operating costs* — by far the lowest of any other snow removal method. *No melted snow*, hence no problem of drainage or icing or necessity of removal of ice formed from melted snow. *No flame to blow out* from high winds or passing trains. *No danger of fire* as a result of leaking oil from tank cars or from diesel engines that might stop over switch. *No chance to burn up ties or insulation.* If desired, the RACOR SNOW BLOWER can be operated by remote control.

Foreign matter such as dirt, sand and top soil which might blow into the switch with snow, is blown out and not left as a residue, as is often the case when snow is melted through heating methods. The introduction of alcohol in atomized form through the anti-freeze injector, combined with the effect of blowing dry compressed air has proved very effective during sleet and freezing-rain conditions.

## SAFETY

Safety is perhaps the most important advantage of all, as employees are not required to manually clear switches under traffic during snowstorms, usually the period of poorest visibility.

***WRITE FOR DESCRIPTIVE LITERATURE***

Brake Shoe COMPANY

**RAMAPO AJAX DIVISION**

109 North Wabash Avenue, Chicago 2, Ill.

***America's most complete line of track specialties***

RACOR STUDS

RACOR TIE PADS

AUTOMATIC SWITCH STANDS

TYPE M
VERTICAL SWITCH RODS

SAMSON SWITCH POINTS

SWITCH POINT LOCKS

RAIL LUBRICATORS

ADJUSTABLE RAIL BRACES

DEPTH HARDENED
MANGANESE STEEL CROSSINGS

REVERSIBLE MANGANESE
STEEL CROSSINGS

MANGANESE STEEL GUARD RAILS

MANGANESE STEEL SWITCH POINT
GUARD RAILS

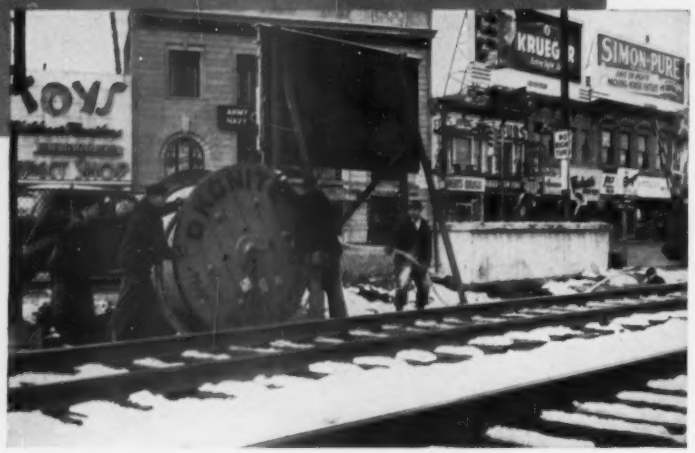
***Sales Offices:***

New York, N. Y.; Buffalo, N. Y.; Cleveland, Ohio; St. Louis, Mo.; Houston, Texas; Denver, Colo.; San Francisco, Cal.; Niagara Falls, Ont., Canada.

***Plants:***

Chicago, Ill.; Chicago Heights, Ill.; E. St. Louis, Ill.; Buffalo, N. Y.; Superior, Wis.; Pueblo, Colo.; Los Angeles, Cal.; Niagara Falls, Ont., Canada.

# ERIE SELECTS OKONITE POWER AND SIGNAL CABLE

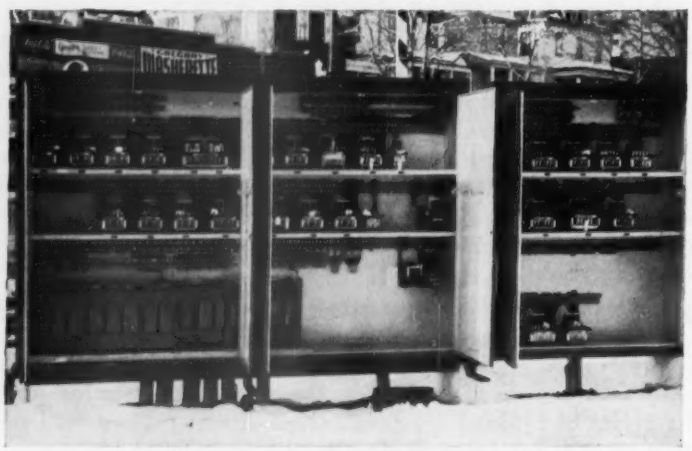



Service-proved Okonite combination power and signal cable being installed in the conduit was selected for resistance to extremes of Eastern climate. The insulation is applied by the strip process and vulcanized in a continuous metal mold to provide a uniform cure throughout the entire length of cable. This assures better physical and electrical characteristics than can be obtained by any other method.

In Passaic, N. J., the Erie Railroad recently removed the old gate towers and manually controlled crossing gate system and installed 13 new automatically controlled gates. The instrument cases are wired with Okonite signal control wires at 13 crossings and the combination power and signal cable the men are shown installing is another Okonite product.

Every automatic crossing along your right of way will benefit from the circuit security provided by Okonite cables and wires. Your maintenance costs will decrease, and good will should increase. Why not profit from the experience of over 100 Class 1 roads and transportation systems and install Okonite?

For information on Okonite railroad wires and cables consult your local representative or write
The Okonite Company, Passaic, N. J.



The Okoprene sheath protecting the Okonite signal control wires specified for this instrument case will not permit end leakage and need not be removed at terminal ends. Thus, the completely protected rubber insulation is not exposed to the elements and will not check or crack. A substantially increased service life is the result.

**OKONITE** SINCE 1878 ***insulated cables***

1725

# "Diversification"—Fine for Everyone but Railroads?

Most large industries, not already highly "diversified," are proceeding in that direction with great diligence. And for the very good reason that experience has shown that no two products follow exactly parallel curves of demand and profitability. There is a limit to the number of areas which the management of one business can successfully supervise—but within such bounds, the more diverse a company's products are, the less likely it is to suffer seriously from depression.

A "one-industry town"—where practically all the gainful employment, except in retail trade, is provided by one big plant or in producing only one commodity—is always in jeopardy, because, when hard times hit that one company or product, the whole town is poverty-stricken. Even in the worst of depressions, it seldom happens that all commodities and companies are equally hard hit at exactly the same time. And a town with diversified employment seldom suffers the periods of great distress that most one-industry localities have experienced at one time or another.

Most of the railway supply companies are diversifying—getting into all kinds of products besides those they make for railroad use. And for the very good reason that the "feast or famine" quality of railroad buying is little short of notorious. There is more than one way of diversifying, of course. That of going into entirely different businesses is only one way. Another is for a company, when it sees demand declining for one product, to move gradually into the production of the article or service which is displacing its staple commodity. Thus it was that many blacksmith shops were gradually converted into garages; and, if memory serves, that is how Studebaker changed over from making farm wagons to automobiles. One of the railroad car-builders is also, an important manufacturer of highway trailers.

The June "Monthly Letter" of the Royal Bank of Canada provides a concise statement of the essential factors in business development—that is, keeping a business prosperous and growing. It goes on to tell the story, quoting from Professor Melvin Copeland of the Harvard Business School, of Cluett, Peabody & Co. This firm built up a big business in starched collars between 1901 and 1919, but then the business fell off rapidly. The customers were shifting to collar-attached shirts—so Cluett, Peabody shifted to the shirt business and has done all right at it.

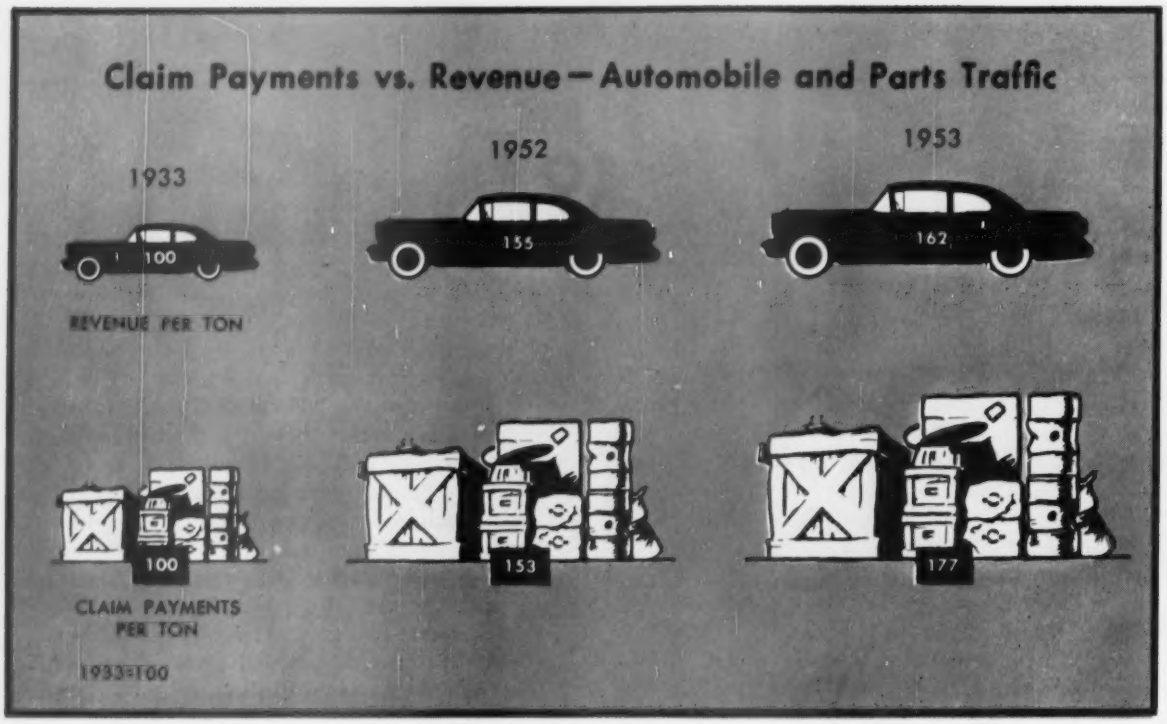
Diversification, growth, getting into new products—endless experiment and innovation—is good for any business and good for the consuming public. Why is it, then, that this healthy business practice—so highly praised when others engage in it—is all but completely forbidden to the railroads?

There is a reason, of course. But it is historic, not contemporary. The railroads were once such complete masters of inland transportation that it was possible for them—where they could get control of water lines—to enjoy almost a complete monopoly of domestic transportation. So their right to own water lines was denied, or severely circumscribed, 40-odd years ago. Conditions have completely changed, but the proscription stands.

When highways multiplied and motor and air transportation developed—making private transportation easy for everybody—the very possibility of monopoly vanished forever from the transportation business. But the law and regulatory tradition continue unchanged in the (now false) assumption that railroads have the innate power to monopolize transportation, unless proscribed or heavily circumscribed from adding non-rail varieties of transportation to their services.

The gas companies were not similarly prevented from going into the electric power business—and, now, in many if not most cities both gas and electric power are provided by one company, to the general convenience and satisfaction of the consuming public. The prohibition which prevents the railroads from following a parallel course in the provision of non-rail varieties of transportation is not unequivocally required by law, but is enforced by regulatory tradition. The Supreme Court used to believe that the supreme law of the land permitted racial segregation in the public schools. It has now changed its mind, without any change in the statutes.

But the question raised here isn't that of how to permit the railroads to "diversify"—the question is, rather, that of establishing the fact that diversification is highly desirable and that the burden of proof should lie with the objectors—since the only justification which ever existed for proscribing it (i.e., the "natural monopoly" of the railroads) has vanished. And how about repealing the "commodities clause"—opening up diversification to the railroads in a really big way? Our point is simply this: If diversification is sound as a principle, then why isn't it sound for the railroads?




# Special Device Cars . . .

## DO THEY PAY OFF?

**Railroads are trying to make traffic handled in special equipment more profitable—The problems are high cost, early obsolescence, empty mileage**

**By J. W. MILLIKEN**
Transportation Editor, *Railway Age*

There seems to be little doubt in the railroad industry that, in future, the carriers—merely to have a chance to stay in business—will have to furnish their customers with greater amounts and varieties of special rolling stock. By "special rolling stock" is meant here cars carrying permanent or semi-permanent racks, bars, etc., specially fitted to handle one commodity of [generally] specified dimensions.

Railroaders, including many top traffic men, are not completely happy about this trend, because:

(1) In many cases, they say, traffic carried in special device cars either loses money, on a fully distributed cost basis, or produces such a slim profit that the value of the traffic to the carriers is questionable; and

(2) They are losing to trucks much of the inbound material, which traffic originally justified their expenditure for specialized equipment for outbound finished products.

Practically every railroad man whom *Railway Age* queried on this subject recognized the "inevitability" of more special equipment, and favored more "research" into the general subject of making the entire process of transportation in special equipment more profitable for all parties. They seem firmly to believe there are solutions which will better distribute costs of this equipment and benefits derived from its use among both users and suppliers. Quite a number of railroads, it appears, are engaged in study of one or more phases of the special car problem.

For the present, most of the railroaders interviewed suggested lifting the payoff of traffic in the special device cars by: (1) Improving turnaround time; and (2) finding portable racks, containers, etc., which could be used in standard equipment, therefore obviating the need for special equipment containing expensive fixed devices. The first of these is generally considered to be a constant goal in handling *all* traffic by rail more profitably, but is especially emphasized in connection with traffic in more expensive equipment.

What are some of the signs pointing to the need for a reexamination of this whole subject of use of special equipment?

(1) The ratio of empty to loaded mileage of all cars, for the railroad industry as a whole, is increasing

steadily, due in large part to the specially equipped car, which, as a general rule, travels loaded one way only;

(2) Freight claim payments on much of the traffic handled in device-equipped cars are taking a bigger and bigger bite out of revenues received for such traffic; and

(3) Average load per car in some special equipment has been decreasing, although rates are based on very low weight minima. Also, there is increasing evidence of patrons' desires for even lower weight minima.

### *Empty Mileage*

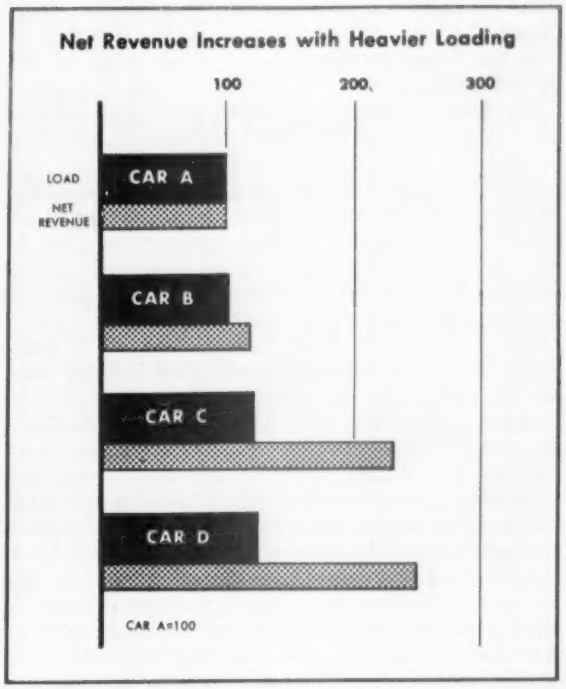
Railroad operating men hate a "one-way car," understandably. The effect of such cars on empty mileage is easy to see, and empty mileage is increasing. Certainly a part of this increase is due to the geographical spreading out of industry, as well as to the decline in the railroads' short-haul business. But this hardly accounts for all of the good-size increase in the ratio of empty to loaded mileage—which in 1953 was up about 24% over comparable figures in 1911 (See Table), when statistics on the ratio first were kept officially.

It is impossible to tell just how much of this rise in transporting empties is due to the one-way car. However, in 1948 and 1949, according to a special study made by the Interstate Commerce Commission's (then) Bureau of Accounts and Cost Finding, the ratio of empty to loaded miles for *all* box cars, for example, was 32%. (That is, for every 100 loaded miles a car traveled, it also made 32 miles empty.) Now special equipment, including auto box and auto parts cars, etc., has a nearly even ratio of 100-100. And since these cars have a somewhat faster turnaround time than the average plain box, it is easy to see that empty mileage made by the specially-equipped box car is considerable.

Applying the presently (more or less) accepted 6 cents per mile as the cost of hauling empties to (all) empty mileage figures (ratio of 55+%) for both 1911 and 1953, the bill for such "service" in the latter year exceeded that of 1911 by about $300 million. Again, it is impossible to tell exactly how much of this increase is due to one-way cars of all types because, the railroads, unfortunately, just don't know. The best educated guess is "about $60 million," or 20% of the total bill, all caused by less than 7% of the freight car fleet.

### *Damage Record*

One of the claims made for the special device car is that it helps to cut freight loss and damage. That this is true would seem unquestionable from the railroads' experience with automobile traffic, which today is the principal commodity group moving in such cars. For example, from 1933-1953, revenue per ton for one large railroad handler of automobiles, parts, etc., increased about 62%, while in the same period claim payments per ton on that traffic went up 77%. But the rise in claim payments was far less than the increase in the all-commodity price index and the average of per-ton claim payments on all other traffic. Thus, the special device car seems to have done a pretty good job of claim prevention for the railroads and their automobile manufacturer customers. Unfortunately, such




data are not readily available for other commodities moving in special equipment.

The average load per car of *all* types has been trending steadily but slowly upward. It is clear that, in some cases, use of special devices in cars has made possible heavier loads than those obtained prior to development of such devices. Nevertheless, from 1947 through 1952, the average load per car of automobiles, parts, etc., went down about 6%—due in part to the lighter weight of materials used in making today's automobiles and parts.

In some cases, heavier loads would be possible, and profitable, to both carrier and shipper. In the case covered in the accompanying chart the expenses of the carrier for handling the heaviest load were only about 2% more than those for handling the lightest one. It would seem, therefore, that, in a few cases at least, incentive rates might encourage customers to make better use of the weight-carrying capacity of a car.

The cement industry, another heavy user of special cars, in the same period has made much better use of freight cars. In those six years, the average load per car of cement increased more than 5%. Perhaps this is one of the reasons there has not been so much complaint on the part of the railroads concerning the covered hopper. This is not to say that revenues earned by the covered hopper have satisfied the carriers completely. The railroads, perhaps, are just less unhappy about covered hoppers than about auto-parts cars.

### *What Is the Solution?*

But assuming that profit on traffic moving in special device cars is either marginal or definitely unprofitable, one question must be answered, viz.: What are the

railroads doing—or what can they do—to correct this situation?

In the "what are they doing" column might be put the following:

(1) Where traffic is unprofitable, railroads frequently have raised rates so high that the business has gone to trucks.

(2) The carriers have persuaded automobile manufacturers, still the largest users of specially equipped cars, to agree that if a specially equipped parts car is not used for two years, the auto company will pay the railroads for the unamortized portion of the expense of equipping the car for the auto trade.

(3) A great part of the inbound business to automobile companies is finished steel, which is highly subject to damage by the elements. Hence if loaded in open-top equipment it must be heavily and expensively wrapped with a protective covering. (The trucker covers the load with a tarp which he uses many times, and his saving is passed along to the patron, who now ships much of the steel by truck.) The railroads are looking for some practicable means of covering the gondola. A covered gondola would protect the steel from the elements and eliminate the shipper's packing expense. A number of different designs of cars have been tried to date, but none of them has filled the bill. It is worth noting, however, that if a satisfactory car of this type ever is developed it will become something of a one-way car itself.

(4) The carriers are trying to encourage shippers to furnish their own racks, pallets, etc., for loading in cars. To this end, free return of these devices has been granted in some cases. The ultimate objective is to have the maximum number of kinds of parts, etc., loaded in cars in these portable "fixtures." Then, if the manufacturer changes the size of the parts he ships there will be no expense to the railroad. And some railroaders are looking to the day when more racks and containers will be collapsible so that empty racks, from three or four cars which have just been unloaded, can be put back in one car and returned to origin point, leaving the unused cars for distribution in unloading territory. This, if accomplished, would mean there would be considerably less special equipment, especially for the automobile industry. Thus, presumably, there would be less empty mileage in connection with handling automobile traffic than there is today.

(5) The carriers are trying to cut turnaround time of cars presently in the automobile trade, and such special cars as are used in handling other traffic. To some extent they have been successful, but by their own admission much can yet be done. Reduced turnaround time, it is hoped, will minimize the investment to be made in device cars by cutting the number needed to perform a given number of ton-miles of service.

(6) In some cases, carriers are doing their best to get shippers to lease special equipment from a builder. The railroad then will pay the shipper mileage for use of the car. A limited amount of success has been achieved. This does not help the empty mileage situation, but it does cut the amount of money the carriers have tied up in equipment.

(7) On some types of special equipment, especially covered hoppers, a number of roads have been able to get return loads for the cars. Inevitably, of course, this means that the car takes longer to get back to the loading point to which it originally was assigned. However, in some cases where the volume of shipments from the plant of the shipper for whom the equipment originally was supplied are not too frequent this probably is no serious handicap, since the equipment does move on relatively fast schedules.

### *Staff Work Needed*

Assuming that any or all of the above-mentioned steps are in the right direction, the only trouble is that progress is too slow. One railroad traffic man who has charge of special equipment for his company, for example, thinks that the idea of the collapsible racks, etc., has the greatest possibility for helping improve the profitability of automobile parts traffic. He admits that his own railroad has not looked into the matter as thoroughly as it should have done. His railroad is handicapped by lack of sufficient staff to do the research necessary to develop such containers or racks.

A top traffic man for another large hauler of automobile traffic agrees heartily that more research has to be done. He admits that auto traffic, and any other traffic

(*Continued on page 78*)

## Increase in Empty Mileage*

| Period | Average Ratios, Empty to Loaded Miles | Increase |
|---|---|---|
| 1911 - 1915 | 45.95 | ..... |
| 1921 - 1925 | 53.40 | 16.2 |
| 1926 - 1930 | 59.30 | 29.1 |
| 1946 - 1950 | 51.96 | 13.1 |
| 1951 - 1953 | 53.94 | 17.4 |

*War periods of 1916-1920 and 1941-1945, and the depression decade of 1931-1940, are not included, because they are considered not to be "normal."

THEO. F. BEHLER, vice-president of the MK&T Transportation Co., was selected by the Katy to head that road's "bi-partisan" piggyback operation.

# This Is "Bi-Partisan" Piggyback

**President D. V. Fraser of the Katy believes T-O-F-C service operated in "good faith" will aid truckers and railroads alike**

A trailer-on-flat-car service which is open to both motor common carriers and the railroad's own patrons has just been begun on the Missouri-Kansas-Texas between Kansas City, Mo., and Oklahoma City, Okla. Katy management believes this type of two-way service will be successful—provided there is understanding and "complete good faith" between motor common carriers and the railroad.

As evidence of this "good faith" approach, the M-K-T is not publishing widespread truck-competitive rates. The road has filed no special tariffs, and in this way has avoided suspension of its new service by regulatory

(*Continued on page 76*)

## *For Motor Common Carriers—*

The M-K-T has published "Division Sheet No. 10341," containing rules and charges for movement of motor common carrier trailers on Katy flat cars between Kansas City and Oklahoma City. The division sheet does not have to be filed with a regulatory agency. Participating motor carriers are listed by name. Effective date of the sheet was July 6, and here are some of its highlights.

***Rules:*** Loading and unloading of trailers on flats will be performed by the railroad; packing of the property itself and packing of the property into the trailer "must be performed by the motor common carrier"; a car may be stopped short of destination if a trailer develops a defect that makes operations unsafe. The motor carrier has 48 hours from notification to make repairs or to unload.

***Trailer Specifications:*** Maximum length, not over 36 ft outside measurement from air hose to bumper (with an additional 30-in. allowance for Thermo-King units).

Maximum width of body or load, 8 ft.

Maximum tread (outside wall of tire to outside wall of tire), 8 ft, 6 in.

Maximum height (bottom of tire to top of trailer or load), 12 ft, 6 in.

Trailers tendered for transportation must be equipped with proper hooks or other retaining devices to comply with railroad requirements for securing on flat cars.

***Charges:*** Loaded trailers not over 26 ft in length, outside measurement (trailer with its lading not to exceed 30,000 lb)—$85.

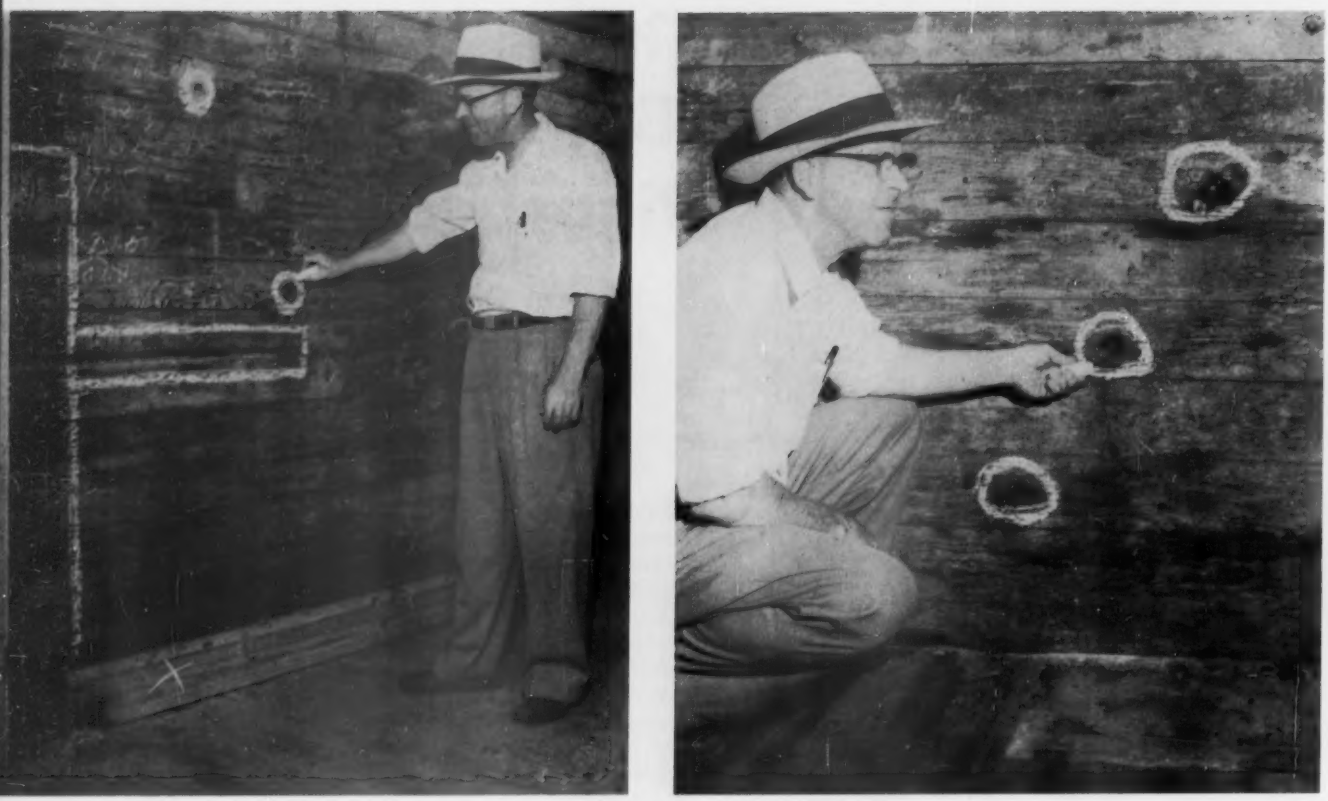
Loaded trailers over 26 ft in length, outside measurement, to and including 36 ft in length (trailer with its lading not to exceed 32,000 pounds)—$93.50.

Loaded trailers over 26 ft in length, outside measurement, to and including 36 ft in length (trailer with its lading not to exceed 39,000 pounds)—$97.75.

Loaded trailers over 26 ft in length, outside measurement, to and including 36 ft in length (trailer with its lading not to exceed 44,000 pounds)—$106.25.

In case the weight of a loaded trailer exceeds that shown above, the railroad will make an added charge of 25 cents per 100 lb for the excess.

Empty trailers, on which a previous loaded movement has been received, will be moved one way between Kansas City and Oklahoma City on this basis: Not over 26 ft in length, outside measurement—$42.50; over 26 ft in length, outside measurement, to and including 36 ft—$50.



1 **ALL OPENINGS—existing or potential—are outlined with chalk including those (right) around bolts or rivets which might leak grain as the sides "work" when the car is moving.**

# How Plastic Spray Upgrades

## Cost and time to make cars grain-tight cut to a fraction by a tough plastic cement being tried on the Rock Island

Cars which formerly took several days to make grain-tight are now being upgraded by the Rock Island in a few hours by two men—and at a cost averaging only $20, compared with $75 to $125 under the old method, which required replacing the lining and other time-consuming operations. The process is an adaptation of that used by the government to preserve ships, planes and defense plant equipment. While its use is still in the experimental stage, the Rock Island is enthusiastic about its possibilities and foresees savings of hundreds of thousands of dollars annually if it is adopted widely.

Known as "cocooning," the new procedure employs two materials—fiber glass screening and a tough plastic cement about the consistency of paint. Three steps complete the operation.

(1) Apply the cement around existing or potential floor and wall openings with an ordinary high-pressure paint spraying machine;

(2) Cut and stick over this initial thin plastic coat small sections of fiber glass screening (small sections are worked at a time so that the plastic does not harden before the screening is pasted on); and

(3) Spray on the final, and thicker, coat, which is held in place by the screening until it dries. Under normal conditions, the car can be loaded within an hour after the spraying has been completed. The sprayed-on material dries hard enough to resist the action of scoop shovels and mechanical grain loaders.

So far several dozen rough box cars have been upgraded for grain. The cars in each instance were among the worst available, but results have been uniformly satisfactory, with no grain lost on any car to date that could be attributed to failure of the "cocooning" method.

The procedure is also being tried out on cars for hauling carbon black, for which a top grade car cannot normally be afforded, because a trip with carbon black would render it unsuitable for general usage. As the carbon black is in sacks, the principal problem is not leakage but sharp projections which tear the sacks.

2 **SMALL LENGTHS of fiber glass screening are stuck with a thin coat of the spray to the walls.**

# Box Cars

Cocooning is used to lick this problem in a slightly different way. Slivers and other sharp projections are first removed, after which the floors and the entire inside surface of the walls and ends are sprayed to a height of about five feet. This gives a smooth and continuous surface, filling in all cracks, gouges and holes in the wood where the bags might be torn.

The whole idea for cocooning the insides of freight cars for upgrading them was developed by Rock Island mechanical officers after witnessing the "moth-balling" of some army locomotives for storage with the plastic spray. While service experience with the sprayed cars is limited, the railroad believes that the quickly-made repairs will be good for several years, and that loss and damage claims on grain will be reduced.

The work is being performed at the Rock Island's Armourdale yard in Kansas City, Kan. Material used is cocoon coating furnished by the R. M. Hollingshead Corporation, of Camden, N. J. On the average, a barrel of the material will upgrade 40 to 50 cars at a material cost of $5 to $10 per car.

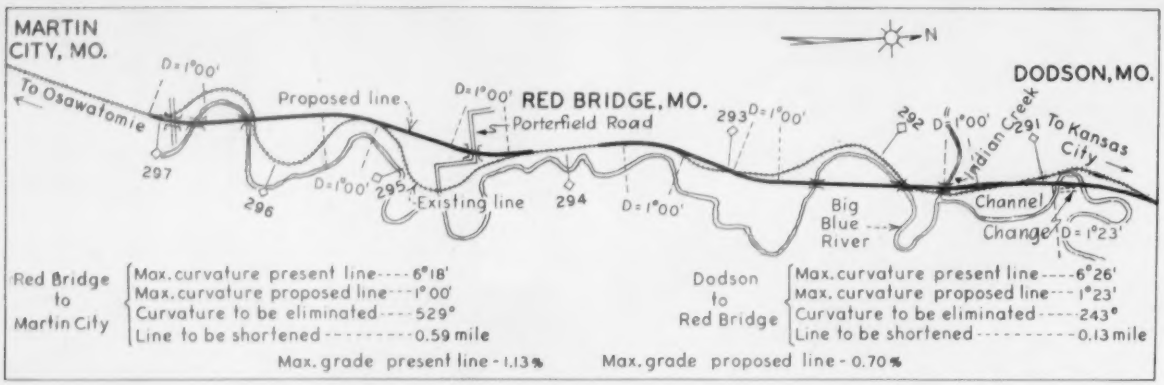
5 **ON CARBON BLACK CARS slivers are removed and the entire inside sprayed 5 ft high.**

3 **THE PROCESS can be used effectively to seal joints between a wall and the floor or ceiling.**

4 **THE FIBER GLASS SCREENING holds final and thicker coat of the spray while it dries.**

Heavy grading...

More bridges needed as...




# This Line-Improvement Project Combines...

- CURVE ELIMINATION
- GRADE REDUCTION
- FLOOD PROTECTION

The first stage is now underway of an extensive line-improvement project which aims ultimately at relocation of a total of about 25 miles of the Missouri Pacific's single-track main line between Kansas City, Mo., and Osawatomie, Kan. Aside from a number of engineering features and problems peculiar to it, this project is of special interest because it is illustrative of a situation that is relatively common on railroads.

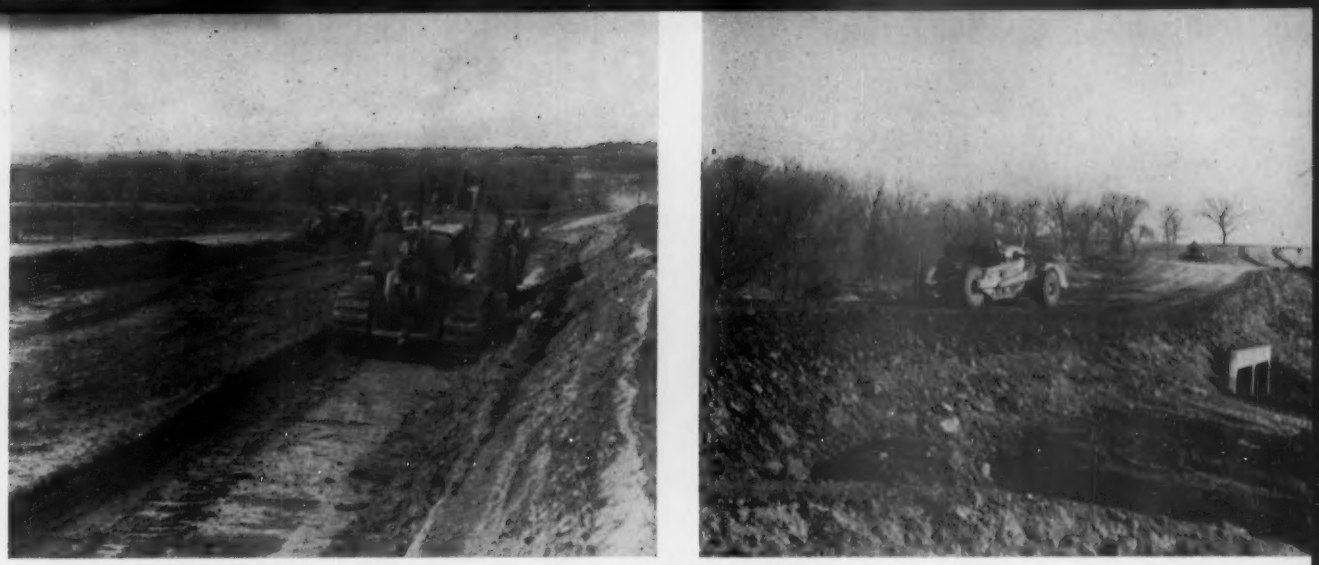
This situation arises from the fact that many lines were located and built at a time when movement of earth incident to construction of cuts and fills was slow and expensive. To expedite construction, and keep cost to a minimum, it was common for locating engineers to follow natural openings established by water courses, rather than to cut more or less directly across country.

As a result, many lines have winding characteristics dictated to a large extent by the meanderings of the particular streams they follow. Not only does this mean that curvature is sometimes heavy and sharp, but it results in greater distances than if the route were more direct. Increased train speeds, and the pressing necessity of reducing the amount of property to be maintained have resulted in heavy pressure on engineering departments to improve these winding lines.

Fortunately, the railroads have found an ally that has helped greatly to solve this problem. That ally is modern grading equipment which, relatively speaking, has greatly reduced the cost of moving the large quantities of earth and rock that normally must be handled when railroad lines are straightened out.

It is precisely this background that has brought about the projected line-improvement project on the MP west of Kansas City. This is primarily a freight line; it carries only one passenger train each way daily.

The first stage of the project, which is being carried out this year, involves relocation of three miles of line between Red Bridge, Mo., and Martin City. It is expected that this portion of the project will be brought to substantial completion this year. The next stage will be the relocation of another three miles between Red Bridge and Dodson, Mo. The railroad is now acquiring the necessary right of way for the relocated line in



**CRAWLER BULLDOZERS (left), working in the cuts or borrow pits, help load wheeled scrapers, which then take off under their own power for dumping on the fills.**

this sector in anticipation of starting work on it as soon as funds can be made available. Next, the company will tackle the relocation of about six miles of line between Redel, Kan., and Stillwell. The final step will be the relocation of about 13 miles of track between Wagstaff, Kan., and Paola, the latter city being about seven miles east of Osawatomie.

In this general territory there are many curves ranging up to about 6 deg. Between Martin City and Dodson, the curvature is occasioned primarily by the fact that the old line follows the meanderings of the Big Blue river. In this section at least, the purpose of the line-improvement work is not only to reduce curvature and grades, but also to elevate the line about three feet above the old grade to minimize the possibility of washouts and submergence due to high water in the river.

Grade reduction is also a factor in this line-improvement work. Between Dodson and Paola, the maximum grade against eastbound traffic is 1.13%. The objective of the improvement program is to reduce this to a maximum of 0.70% compensated for curvature.

The work was started on the segment between Red Bridge and Martin City because conditions there were felt to be most in need of correction, (See map at left).

These improvements in the Red Bridge-Martin City sector are being obtained at a considerable price, in the form of heavy grading and construction of two new crossings over the Big Blue river, whereas none existed before.

The grading will involve movement of 341,000 cu yd of earth and 156,000 cu yd of rock. There are two long cuts on the new alinement, one with a maximum depth of 50 ft, involving excavation mostly in rock.

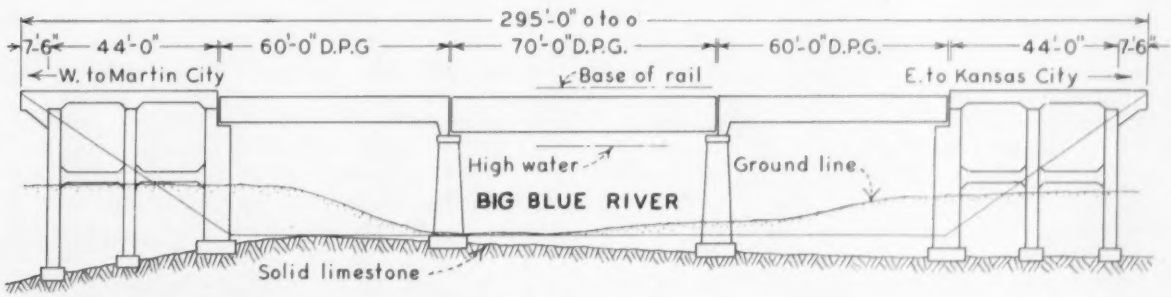
The largest embankment is located on that segment of the line between the two river bridges. This fill is being built with an earth core overlaid with rock taken from an adjacent cut. A fill at the westerly end of the line is being built with borrow because of the uneconomical haul that would be involved in using material excavated from cuts.

The grading along with construction of the bridge substructures and culverts, is being carried out under contract by the George Bennett Construction Company, Kansas City. For this work the contractor has used a variety of crawler and wheel-mounted excavating and hauling units. Track work will be done by railroad company forces.

The two bridges being built across the Big Blue river are identical with each other in design and size. Each consists of three deck-girder spans on concrete piers and abutments, the spans in each structure including one of 70 ft long and two of 60 ft long. Because solid limestone was encountered close to the surface at both locations, it was considered economical to design the reinforced-concrete abutments in the form of rigid-frame approach spans, each 44 ft long, founded on rock.

In addition to the river crossings, other bridge structures include a single-span deck-plate girder bridge

*(Continued on page 76)*




**TWO NEW BRIDGES being built across the Big Blue river in the Red Bridge-Martin City section are identical in all major respects.**

YARDMASTER CAN TALK to anyone in the yard via loudspeakers or radio from his top floor office (right).

## WITH NEW COMMUNICATIONS . . .

# Yard Operations Streamlined

**Loudspeaker system, radio communications, intercom and walkie-talkies reduce time required to process cars in Denver**

The Union Pacific has increased the operating efficiency of its Denver freight yards by installing a modern communications system with which the yardmaster, in a central location, can talk to men over the entire area, and thus coordinate their actions.

The new communications include 78 talk-back and seven paging speakers; intercoms with six offices; and yard radio for industrial switching (16 locomotives equipped) and car checking (three base stations and six walkie-talkies). In the Denver area, the UP serves 400 industries, and interchanges freight cars with the Burlington, the Colorado & Southern, the Santa Fe, the Rock Island and the Rio Grande.

The UP yard area consists of several small yards, extending for three miles from the Union passenger station at 17th street to 44th street. Adjacent to the passenger station area is the 23rd Street team track with spur tracks, down Blake and Market streets, serving mills, produce dealers and warehouses. Other yards include the coach yard near the depot; the 29th Street break-up yard (for inbound freight trains); the Hill yard (location of yardmaster's office in tower, and yard office near 36th street); the Pullman (train yard at 40th street); and the stake yard near 44th street, which includes the rip track and stores department. The UP main line links these yards, some of them being north, and others south, of the main tracks.

### *Yardmaster Coordinates Operations*

Thirty-five engine shifts (one engine working eight hours) are used daily in yard work, industrial switching and delivery of cuts to foreign railroads. Three of these shifts work in the yard on make-up and break-up of trains, switching coaches in the depot, and industrial switching. After midnight, for example, one crew works along Blake and Market streets, and other crews work from 8 a.m. to 4 p.m., and from midnight to 8 a.m., around the so-called Sand Creek area—the site of many grain elevators, lumber companies and oil refineries, in the northeast part of the city.

The yardmaster formerly had a problem keeping track of crews on these assignments. In fact, he would give instructions to the Sand Creek crew, and often did not see or hear from them until they returned at the end of their shift. In an emergency, he could drive out there in his automobile to look for them; or he could call some of the industries on the telephone inquiring as to his crew's location. Such methods were time consuming, and often ineffective.

Now he calls them by radio to give them changes in instructions or other information. And they can readily call him. When crews are working in the downtown area, the yardmaster can readily call them over the loudspeaker system, using talk-backs if he knows their location, and paging speakers when he doesn't know their location.

Generally the yardmaster assigns about two hours of work to a crew when they come on duty. When they are finished, they report back to him. In the days before loudspeakers and radio, the switching crew came back to the yard office, or a man went to a telephone and called the office. If the yardmaster was in, they were able to get further instructions without delay. But if, as was often the situation, he was out trouble-shooting, it was a case of looking for him on foot, or

**SWITCH CREW FOREMAN** gets instructions via radio.

**CLERK TRANSCRIBES** data from these recorders.

of waiting until he was located. The result, of course, was lost man-hours, for crews and for the yardmaster, who spent time and effort running around the yard looking for crews.

Now the yardmaster is at a desk on the top floor of a new yard tower, from which he can see most of the yard area around him. Since he stays in one location, crews do not lose time when calling him, as they did previously, because they know where he is.

There are talk-backs at several other locations, such as the rip track, depot yardmaster's office, stake yard, switch tenders' locations, and chief dispatcher's office. Talk-back speakers are accessible to any person working in the yard.

When industries want special switching services, they get them, because they can call the yardmaster or the switch desk at the freight office requesting the service; and these men can quickly call the switching crew and arrange for the work to be done. The person who receives the industry's request makes a note of the time and date of the request as well as other pertinent information. When a car is spotted or picked up by the switch crew, the foreman makes a notation of the time and date of action. Thus, the railroad has a ready check upon the promptness with which industry calls are answered, and action taken.

### *Improved Car Checking*

A car checker, using a Handie-Talkie, reads off initials, car number and light weight of cars in transfer cuts from other railroads, and on UP outbound freight trains. He reads this information into his radio packset microphone, from which the information is broadcast, picked up by a receiving base station, put on a pair of control wires, sent into the yard office and recorded on a Soundscriber. When the car checker's radio transmits, the Soundscriber is automatically turned on, to record the information. There are two recorders for each car checking frequency, so a man can call in data for several trains before a new record must be put on the machine. A yard clerk, using a headset, transcribes the recording, making a list for office use.

A car checker's list of cars in transfer cuts is checked

**CAR CHECKER READS** car data into microphone.

against the waybills of those cars. (For inbound trains, consist lists are sent by printing telegraph from the last terminal.) Consist lists from three receivers are put on a Ditto machine, from which 10 copies are made for distribution to various UP offices. Kelly systems pneumatic tubes bring consist and switch lists to the yardmaster's office in the tower.

When an outbound UP train leaves the yard, a car checker records a consist list as the train passes him. This recorded list is checked against cards, one for each car, prepared from the cars' waybills. Next, the cards are put through a card-to-tape machine which punches out a consist list on tape, which is then fed into a transmitting Teleprinter, for transmission to the train's next terminal.

The Pacific Fruit Express, which has space in the yard office, has its own transmitting and receiving Teletypes.

The yardmaster, whose office is atop a three-story brick and steel tower at 36th street, has lines going

from his console to 78 talk-back and seven paging speakers. The console contains keys, lights and a buzzer, loudspeaker and a microphone. Keys on the control console are telephone-type, two positions, each position connected to a loudspeaker line. White keys are for paging, four speakers being located west of the tower (toward the passenger station) and three east of the tower. Orange keys are for talk-back speakers, and a black key is for the radio. Center position for keys is "off" and there is no spring return, thus enabling the yardmaster to use both hands while talking.

A separate intercom system is installed in offices of personnel who constantly communicate with each other. They are the chief clerk in the yard office, general yardmaster, crew dispatcher, car accountant, manifest clerk, terminal superintendent and his secretary, and yardmaster. The terminal superintendent has a console from which he can talk to any of the other offices on the intercom system. Each office has a console with a loudspeaker and push-to-talk keys for putting that station on the line.

### *Packsets Work with Fixed Stations*

To secure good coverage, the car checkers' packsets operate in conjunction with base stations, i.e., they send to a receiving base station, and receive from a separate transmitting base station. These base stations are approximately one mile apart; the receiving station is at 29th Street yard, and the transmitting base station is at Pullman yard at 40th street. All packsets receive on 160.23 mc, but some of them transmit on channel No. 1 at 160.53 mc, and others transmit on channel No. 2 at 160.59 mc.

At the yard office, the clerk who transcribes the car checkers' lists has a remote control unit and handset which enables him to monitor car checking operations, or to talk to car checkers via radio. Two Soundscribers are for each walkie-talkie channel, one of them being "turned on" all the time ready to record calls. The car checkers' packsets are Motorola Handie-Talkies which operate on a self-contained two-cell storage battery which will last four to six hours.

The base station for the yard radio system is at the tower at 36th street; radio equipment is on the second floor of the tower, and the antenna is on the roof. The relay room in the basement, which also serves as a radio shop, has a receiver for monitoring the yard radio. The terminal superintendent has a remote control unit in his office, and radio equipment in his automobile, so he can keep in contact with yard operations. The yardmaster has remote control of the radio by a key on his control console.

Sixteen diesel switch engines are radio equipped. The radio equipment is mounted in the front of the cab between the engineman and the fireman, with the loudspeaker mounted on the equipment rack. The handset and control unit are mounted on the cab wall behind the fireman's seat near the door. The major items of radio equipment were furnished by Motorola, Inc.

The Denver yard communications project was designed and installed under the jurisdiction of G. R. Van Eaton, superintendent of telegraph.

## Benchmarks and Yardsticks

**THERE IS A PERENNIAL TRAGEDY**—around the railroads and everywhere else—of the fellow with brilliant ideas but with limited skill in "selling" them. Ability to develop ideas of better ways to do useful jobs is often found in the type known as the "introvert," who spends most of his time turning things over in his own mind, having little interest in observing the ways of other people.

**The man who develops** intrinsically meritorious ideas but is chronically unable to interest others in them will frequently be found to suffer one of two fatal defects (sometimes both) in his approach. One such handicap is that he is likely to be so "full of his subject" that he thinks about it and talks about it in a kind of "shorthand" that is fully intelligible only to himself.

**Your reporter** has known several railroad specialists who suffered seriously from this affliction. Their ideas were almost always sound, but, in telling about them, they cut corners so that no one less intensively acquainted than they with their own specialized fields could understand what they were talking about, most of the time.

**When a lawyer is talking** to a lawyer, or a rate man to another rate man, or an engineer to another engineer—it is a useful practice to assume a lot of expert knowledge on the part of the listener, and not bore him with the ABC's. But when an engineer or an accountant is talking to a general manager who has never been either an engineer or an accountant, then the simpler his discourse is, the better.

**Another shortcoming** of many able "idea men" is the disgust they develop for people who are "too dumb to understand" what their brilliant minds have conceived. There are a lot of people with ideas to "save the railroads" (many of their ideas intrinsically sound, too) whose first approach to a "prospect" is to tell him how stupid and backward most railroad men are. Human beings are a stubborn breed, though, and the ignoramus—who is expected to surrender abjectly when justly accused of his retarded mentality—sometimes responds by expelling the intruder from his office. This is too bad, because the visitor may have had some important information to offer.

**A supervisor or executive** can scarcely do a greater favor to himself or his organization than to endeavor patiently to find out what some of these bright but inarticulate "idea men" are really trying to tell him; and to teach the "idea men," if he can, some of the elementary skills of salesmanship. The Vikings discovered America centuries before Columbus did, but nothing came of it. Columbus was a salesman as well as a discoverer.

J.G.L.

# "We'll Do All Right,"

## SAYS "PAT" McGINNIS

**" . . . if we'll really go to work and use all the available means at our disposal to adapt our business to changed conditions"**

Despite the New Haven's current unsatisfactory earnings—net railway operating income barely in the black for the first four months; and current liabilities in excess of current assets—the road's new president, Patrick B. McGinnis, finds a great deal to encourage him in the system's average train-mile earnings. In 1953 the road's passenger trains grossed an average of $6.43 per train mile and its freight trains $26.38—compared to national averages of $4.54 and $17.23, respectively. Mr. McGinnis is sensitive to the need of the New Haven to improve its plant, equipment and service—in order to hold its own in the highly competitive transportation market of southern New England. But, he adds, "Before I can get the money we'll need to invest in this property, we've first got to restore our credit; and that means getting more net earnings out of our plant substantially as it now exists. Getting such earnings is the first step on which all subsequent steps depend."

One of the road's greatest obstacles to adequate earnings, in his opinion, is the high terminal cost of handling large movements of commuters into both Boston and New York. He hopes he will be able to interest urban planners and developers in both centers in realizing their mistake in, so far, having omitted passenger transportation by rail from consideration in their programs.

"Take that new Port Authority bus terminal in New York, for instance," he went on to say—"that place handles as many commuters as Grand Central Terminal (both New York Central and New Haven combined). I don't believe our commuters can afford to support such terminals as South Station, Boston, and Grand Central Terminal, New York, when commuters by bus are getting a practically tax-free facility, such as the Port Authority bus terminal. Grand Central Terminal has a tax bill of over $5 million and South Station one of over $2 million to pay, while commuters using the bus terminal have practically no contribution to make to cover taxes on the terminal they use.

"You can't go directly into New York City by any form of public transportation except by rail, without using a tax-free terminal, provided by government investment and financed by tax-free bonds. We can't find the money to keep on providing adequate service for the people who prefer to travel by rail—unless we can get for our commuter service treatment equivalent to that provided by the generosity of the taxpayers for bus and airplane patrons. Unless the authorities are going to treat our terminals exactly as they do the air and bus terminals, then I believe it is up to the authorities to take over our present terminal facilities, so as to get them off the tax rolls. I intend to find out now—not five years from now—whether the agencies developing government-owned transportation around our cities are going to include railroad transportation in their planning, or not. And we'll be governed accordingly."

**LOW-SLUNG TRAINS of the Talgo type seem to have a definite place in Mr. McGinnis' passenger service plans.**

But it isn't just the commuter business to which Mr. McGinnis looks for profitable passenger operations. He also wants to improve the volume and earnings of the road's non-commuter passenger business by more skillful pricing and better service. For instance, he is looking forward to the provision of an outlying station with ample parking facilities in the New York area—similar to the Route 128 layout which the Dumaine regime constructed near Boston, and which has proved a great convenience to Boston people in travel to New York. By acquisition of some lightweight trains with low center of gravity (e.g., of the Talgo variety), he believes the overall time from suburban Boston to suburban New York can be reduced to 2½ hours.

On the fare side, he is putting in "family fares" (full fare for father, all others half-fare or less), good seven days a week, between New York and Boston. He is concerned with the "stand-by" disadvantage the railways suffer and, to overcome it at least in part, he is considering offering reduced rates for regular train patrons—favoring them fare-wise over the patrons who ride the rails only when the planes are grounded. Says

Mr. McGinnis: "I have in mind selling annual 'passes'—not good for commuting nor between Boston and New York, but everywhere else. We intend to make it advantageous for passengers to help us support our 'stand-by' equipment."

On the side of freight service Mr. McGinnis draws attention to rate and service changes which have been made to help recapture inbound coal tonnage from barge movement. Continuing, he said:

"We have got to give greater emphasis in freight-rate making to our favorable cost factors, and largely forget about the value of the commodities moved. The value of our service can never be greater than the price for which the customer can get equivalent service from some other carrier. If we price our services in accordance with our economic characteristics, we can successfully compete with contract and private carriers, including barges and even the pipe-lines.

"I am going to do my best to make incentive and bulk rates. The railroads are in the bulk business—but with a retail price structure. The contract and private highway carriers, on the contrary, are essentially a retail form of transportation, doing business with bulk prices. The contrast between the way they set up their charges and the way we set up ours does not make sense, and we are going to do our best to change it.

"If the railroads will work out the kind of rates that are natural to their type of service—that is, rates that are lower than those of any other form of transportation, wherever railroad costs are lower—then there'll never be a boat on the St. Lawrence Seaway; and there'll be mighty little long-haul freight traffic on the highways. The outcome all depends on our degree of energy and intelligence in developing rates on a factual basis; and on the degree of cooperation we get from our customers in serving their own interest, by helping us to persuade the regulators and legislators to permit us to be realistic in our pricing."

Mr. McGinnis is hopeful that recent developments in the application of electronics to signaling will afford large economies in train and yard operation. He expects further savings from quantity-built equipment of improved design and shock-resistant qualities; and improved bearings. But, primarily, he foresees the necessity for rapid improvement in railroad pricing and service—not only as an aggressive traffic-building device, but as necessary for the defense of existing business—in the light of the construction of the St. Lawrence Seaway, high-speed highways, and the imminent invasion of the short-haul field by air transport, using helicopters.

Mr. McGinnis believes that incentive arrangements are desirable for employees—especially those with any relationship to sales. He is interested in developing a "second team" and a "third team" on the railroad, asserting that it now has only a "first team"—a condition which "doesn't allow enough time to think."

"We'll do all right," he insists, "if we'll really go to work and use all available means at our disposal to adapt our business to changed conditions. But all these changes and improvements will cost money, and that requires credit—which we won't have unless we can improve our earnings performance with what we already have. That's the first step and, of course, the all-important one at this time."

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HOW MONON WILL USE

# 30 Covered Hopper Cars

The Chicago, Indianapolis & Louisville has announced its service plans for 30 PS-2 70-ton covered hopper cars, built by the Pullman-Standard Car Manufacturing Company and delivered earlier this year.

Fifteen of the cars have been prepared for bulk flour movement, with top loading and unloading, by installation of a steel plate (having a clean-out hole), which is welded in just over the Enterprise gate outlet. The cars have then been sand blasted to remove interior mill scale, and given a coat of Number 2-M penetrating wax, supplied by the Nu Surfas Corporation, Chicago, to keep flour from sticking to the sides of the hopper.

These cars are in service between Chicago and Louisville, Ky., handling bulk flour products for General Mills.

The other 15 cars of the 30-car order are being used in experimental service for handling such bulk commodities as clay, starch, etc., as part of an extensive plan announced by Monon Traffic Vice-President Ferd W. Kuhn to determine the effect of specialized equipment upon such items as loading and unloading costs, freight claims and other important factors.

(*Continued from page 15*)
yards, Mr. Fisher added, and said interlocking and signal facilities would be modernized and consolidated.

**Rock Island.**—A 1-million-bushel addition to grain elevators at Armourdale yard, Kansas City, Kan., is being built by S. N. Neilson Company at a cost of $597,000. At Little Rock, Ark., the G. W. May Construction Company is building a masonry-type warehouse to cost $90,545. A two-story yard office, of masonry construction, is being built by Bonanza Builders, Inc., at El Reno, Okla., at a cost of $25,617.

**Southern Pacific.**—This road has applied to the ICC for authority to construct and operate a 9-mile line to serve a plant of the California Portland Cement Company in the vicinity of Mojave, Cal. The cement company would pay for the construction and donate the right-of-way. In return, it would receive partial refunds of freight charges paid on its shipments over SP. The refund arrangement would not apply on any shipment delivered to or received from any other carrier at Mojave.

**Texas & Pacific.**—Because of high water conditions in 1953, a mile of main-line trackage on the Louisiana division east of Alexandria, La., will be raised an average of three feet, with a maximum raise of 5.6 feet.

**West Virginia Northern.** — This road has applied for ICC authority to construct a 4,200-ft extension out of its northern terminus at Kingwood, W. Va.

**Western Pacific.**—A new combination depot and office will replace existing facilities at Fruitvale, Cal. The new building, approximately 36 x 23 ft, plus a 126-x-24 ft freight shed over a concrete platform, is being constructed by company forces. A new $130,000 steel sugar shed, 360 ft x 80 ft, is being built to replace the present timber facility at Oakland, Cal. Ben C. Gerwick and the Soule Steel Company are working with company forces on it.

# Rates & Fares

## Family Fare Bargains Now Include New England

New England vacation points have been added to destinations which can be reached under the new bargain fares for family travel, for either coach or first-class tickets (*Railway Age* May 17, page 8, and May 10, page 8). The bargain fares now apply between points on the Boston & Maine, the New Haven and the Central Vermont.

"Popular interest in the family-plan vacation fare bargains has been increasing ever since their announcement," Vanderbilt Armold, chairman of the Trunk Line-Central Passenger Committee of the Eastern Railroads, said, "and this extension of the territory covered will lend impetus to the move toward rail travel."

# Organizations

## More Time for Filings On Carrier Associations

Interested parties now have until July 30 to advise the Interstate Commerce Commission of their reactions to its proposed rules which would govern the extent to which carrier associations may participate in commission cases. The previous deadline was July 15.

The extension was in response to a request of American Trucking Associations (*Railway Age*, June 1, page 9).

## Should Truckers, Freight Forwarders, Join Boards?

Should motor common carriers and freight forwarders participate in shippers' advisory board meetings?

That question was raised by the Executive Committee of the Great Lakes Regional Advisory Board at the board's 89th regular meeting, held in Traverse City, Mich., June 23-24. A joint committee of shippers and Railroad Contact Committee members will explore possible effects of the proposal, and make recommendations later.

George J. Bleibtrey, director of traffic, Motor Wheel Corporation, speaking for the committee, said the suggestion arose as a result of frequent requests from forwarders to attend board meetings. Under it, forwarders and motor carriers who might participate would contribute financial support. "We don't want to do anything to deteriorate or detract from what we have built up over the years," Mr. Bleibtrey told a reporter for *Railway Age*, "but we want to investigate the possibility of inviting other modes of transportation to discuss our problems with them all at the same time."

A cautious approach to the proposal was advocated by M. M. Cronk, vice-president and general manager, Chesapeake & Ohio, who, as chairman of the Railroad Contact Committee, suggested a full understanding of what is wanted before recommendations are made. He said his committee recognizes the value of fresh thinking, but is not sure that changing the philosophy of shippers' boards would justify the risk it involves of upsetting "the fine working partnership" that has been established between the shippers and the railroads.

In other actions, the Executive Committee asked railroads to solicit LCL traffic actively, and to do a better job of reporting cars released with debris; and agreed that, "insofar as possible," board members would not oppose abandonment applications that do not directly affect them.

Next meeting of the board will be at Mansfield, Ohio, September 21-22.

## AAR Directors Praise Shipper Advisory Boards

The 13 regional shippers advisory boards have won the praise of the board of directors of the Association of American Railroads, in the form of a resolution marking the start of the fourth decade of SAB services.

The resolution, passed unanimously and announced by William T. Faricy, president of the AAR, expressed thanks for the efforts of the boards and their national association. It requested "con-

**OFFICIALS of the American Society of Mechanical Engineers took time out from their recent semiannual meeting in Pittsburgh to pay tribute to George Westinghouse, inventor of the air brake, who served as president of ASME in 1910. Participating in a wreath-laying ceremony at Westinghouse Memorial in Schenley Park are (from left): C. E. Davies, ASME secretary; Lewis K. Sillcox, ASME president and honorary vice-chairman of the board of New York Air Brake Company; L. E. Osborne, executive vice-president, Westinghouse Electric Corporation; and Herbert A. May, senior vice-president, Westinghouse Air Brake Company. Dr. Sillcox, who has been responsible for development of numerous railroad safety devices, said: "George Westinghouse made modern railroading possible, and modern railroading made possible the giant industrial complex that is America today."**

tinued cooperation" to help the railroads do their job.

The advisory boards were first organized in 1923. They now have a membership of more than 25,000 and represent shippers of about 85% of all rail freight.

## Financial

### Boston & Maine to Sell Branch to New Company

Directors of the Boston & Maine have authorized sale to S. M. Pinsly, of Boston, of the B&M's line from Concord, N. H., to Claremont Junction, 56.7 miles, and of a tributary freight-only branch from Contoocook to Emerson station in West Henniker.

Included in the sale is a rail-motor car for operation of passenger, express and mail service.

The line will be taken over as soon as the ICC approves the sale and operation by a newly formed short line railroad corporation. Mr. Pinsly has told the B&M he intends to continue freight service, and to provide passenger service as long as the new railroad continues to carry mail. He contemplates all-diesel operation.

A short-line operation can be carried on at much less expense than operation by a Class I carrier, a B&M spokesman said, adding that, if his company had to retain the line it would be necessary to discontinue passenger service and abandon a considerable portion of the trackage.

Mr. Pinsly also operates the Hoosac Tunnel & Wilmington, from Hoosac Tunnel, Mass., to Readsboro, Vt., and two other short lines which formerly were parts of the B&M system—the Saratoga & Schuylerville from Mechanicville, N. Y., to the two towns named, and the Sanford & Eastern, between Sanford, Me., and the Portland Terminal.

**Alleghany Corporation.** — *Carrier Status.*—The ICC has invited this corporation to slough off the carrier status it acquired under a 1945 commission order which approved its control of the Chesapeake & Ohio. The invitation was in the form of another commission order in the 1945 proceeding (F. D. No. 14692). The new order, dated June 22, noted that Alleghany recently advised the commission that it had divested itself of control of C&O. (The divestment was part of the arrangement for Robert R. Young's successful bid for control of New York Central.) The order went on to assert that Alleghany should no longer have its carrier status, and to call upon Alleghany to show cause by July 15 why the 1945 order should not be vacated.

**Central of Georgia.**—*Operation of South Western.*—The ICC has approved this road's operation of SW properties under contract. The commission-approved plan of reorganization for CofG contemplated that the reorganized company would acquire SW properties, which had long been part of the CofG system. Court decisions having thwarted consummation of that phase of the revamp plan, the commission accepted the contractual arrangement as "the only feasible method whereby properties of the South Western may be operated as part of the [CofG] system which we have heretofore found would be in the public interest." Central owns about 98% of SW's stock.

**Chesapeake & Ohio.** — *Trackage Rights.*—This road has applied to the ICC for authority to acquire trackage rights over the New York Central at Detroit and through the Central tunnel under the Detroit river. Intended to cut freight passage time between Delray interlocking, Detroit and Pelton, Ont., by better than half the current 4½-hour period, the plan would eliminate use of C&O car ferries. The proposed contract with the Central calls for payment of $5.75 per car traversing the 5.1-mile stretch, which includes 1.8 miles in the tunnel to the Canadian border. A minimum charge of $2.5 million for each five-year period in the 21-year contract is provided, with the fee for the last year to be no less than a pro rata proportion of the minimum charge for the last previous five-year period. Plans, also subject to approval of Canadian government authorities, call for the C&O to run 5.6 miles over the Canada Southern after leaving the tunnel, to connect with the Detroit River Railway, leased to C&O, at Pelton. The overall distance from the Delray connection at Detroit to Pelton is 12.1 miles.

**Erie.**—*Control of Lessors.*—The ICC has authorized this road to acquire control, through stock ownership, of two of its lessor companies—the Goshen & Deckertown and the Montgomery & Erie. Erie now owns 4,809 shares of Goshen's 9,619 shares of stock and 7,499 shares of Montgomery's 15,000 shares. The approved acquisition plan contemplates purchase by Erie of additional shares as they become available—at per share prices not exceeding $9.75 for Goshen and $9 for Montgomery.

**New Jersey & New York.** — *Trustee.*—The ICC has ratified the court's appointment of Horace Banta as trustee of this road. Mr. Banta is successor to the late Peter Duryee.

**New York, Chicago & St. Louis.** —*Use of Lackawanna Station at Buffalo.*—This road has applied to the ICC for approval of modifications of the agreement under which it uses the Lackawanna's station and other passenger-service facilities at Buffalo, N.Y. The proposed modifications would add a cancellation clause to the agreement and change those provisions which relate to liability for employee injuries.

**Pennsylvania.** — *Modification of Leases.*—The ICC has approved this road's plans (submitted in 17 applications) for modifying leases under which it operates properties of 18 subsidiary companies. The modifications are expected to result in annual savings of approximately $1,900,000 in federal income taxes. They will eliminate from PRR rental payments that part of such payments which it has been getting back in dividends from the subsidiaries.

**St. Louis, San Francisco & Texas.**—*Trackage Rights.*—The ICC has approved a new agreement under which this road will continue operating under trackage rights over the Texas & New Orleans' 9-mile line between Sherman, Tex., and Denison.

**Tennessee, Alabama & Georgia.** —*Stock Option Plan.*—The ICC has authorized this road to issue 10,000 additional shares of its $5-par common stock to be sold to its president, O. B. Keister, Jr., under a stock option plan.

## Supply Trade

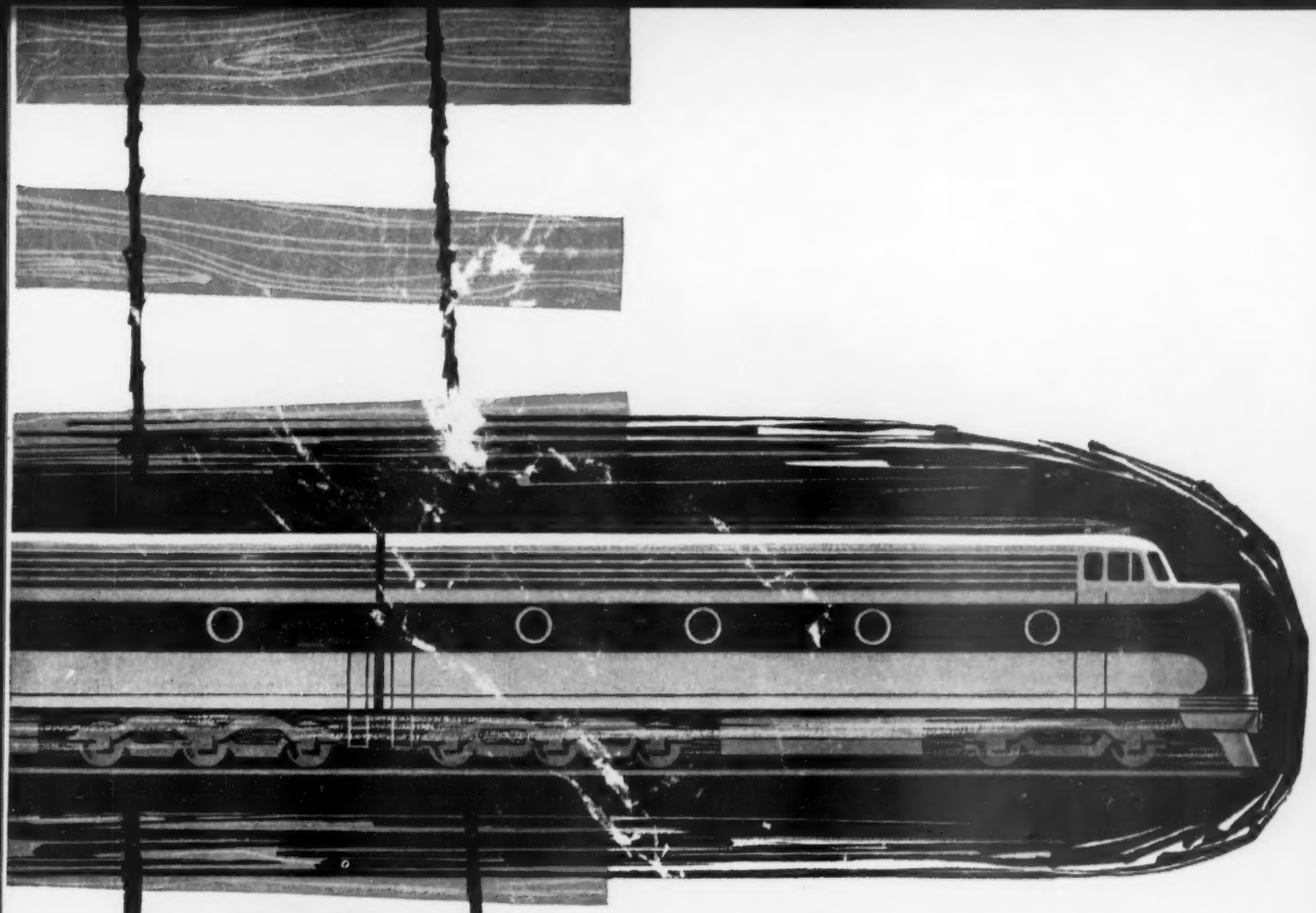
**John W. Darr,** recently with the public relations firm of Selvage, Lee & Chase, has been appointed director of public relations and advertising for **ACF Industries, Inc.**

**F. M. Sholders,** manager of the Omaha branch of **Graybar Electric Company,** has been appointed Kansas City district sales manager, and has been succeeded by **C. C. McGraw,** manager at Knoxville. **W. A. Arthur,** manager at Oklahoma City, has been transferred to Flint, Mich., and has been succeeded by **J. L. Ringwalt,** appliance sales manager at Tulsa.

Activities of **Pyrene Manufacturing Company** and its wholly owned affiliate, the **C-O-Two Fire Equipment Company,** have been unified, but for the time being operations will continue under both company names. Officers include **S. R. Baker,** chairman of board and president; **F. B. Allen, M. A. Laswell, Louis Levine** and **A. F. Ratzer,** vice-presidents; **Meyer Botwinik,** treasurer; and **B. S. MacCabe,** secretary. In addition, **L. E. Eckelmann** is a vice-president of Pyrene.

**D. F. McCandlish,** manager of the **Air Reduction Sales Company** district office in Chicago, has been appointed regional manager of the north

(*Continued on page 70*)



**fast**

**modern**

**trains go**

**far with**

• Experienced railroaders have learned that quality lubrication is one of the best ways to lower operating costs. They know the importance of keeping expensive equipment running like new. That's why they make tracks for Standard.

Standard's diesel fuels and oils make no compromise with quality: they're skillfully refined, engineered and thoroughly tested to assure top performance. And then, Standard's strategically located refineries and service facilities blanket the railroad heart of America.

The Standard Oil sign means top quality products and quick, to-the-spot delivery. That's why so many modern trains go fast and far, *economically* with Standard.

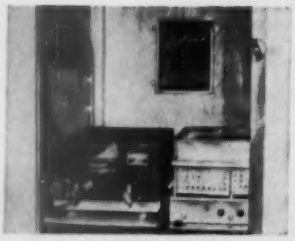
STANDARD

**STANDARD OIL COMPANY**
(*Indiana*)

# these C-D installations are paying off!

**RACK-MOUNTING**

C-D vibrator converter installation showing rack-mounting with plug-in feature which simplifies wiring and facilitates installation.

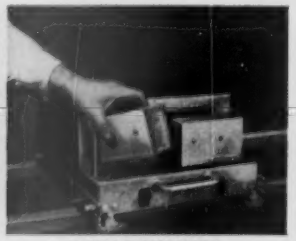


**CONVENIENT SIGNAL**

Pilot light changes from green to red to indicate operation on stand-by vibrator. No attention is required from the train crew.

**SELF-SERVICING**

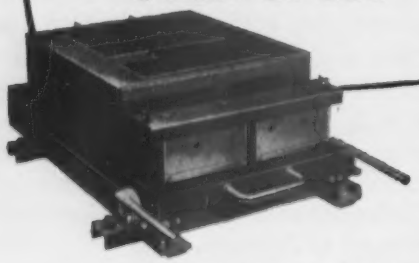
Patented C-D dual vibrator circuit with automatic switch-over, assures uninterrupted radio communications en route.



**ONLY 2 MINUTES**

This railroad finds that it takes only two minutes to plug in a fresh vibrator at the depot, during routine maintenance check-up.

## C-D vibrator converter



- *Saves 60% on cost of initial installation*
- *Saves 50% each year on maintenance*
- *Services itself en route*
- *Field-proved and accepted by over 50 leading railroads*

*Write for our catalog, Cornell-Dubilier Electric Corp., Dept. RA74 Indianapolis Division 2900 Columbia Ave., Indianapolis, Indiana. Affiliated Member A.A.R.*

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**by the makers of world-famous C-D capacitors**

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IN ALL SEASONS CLIMATES ALTITUDES

NO FOG
NO FILM
NO FROST

Write for detailed information on the different types of double glazed units and various designs of sash frames —also details on Edwards Trap Doors and Retractible Steps.

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**40 Ton Steel Sheathed Box Cars**
**50 Ton All Steel Gondolas**
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**8000 Gal. Tank Cars Cl. III**
**Coiled—Non Coiled**
**50 or 70 Ton Flat Cars 40' Long**
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What **IS** a profit-producing freight car?

The original metal floor protector was developed in **STANDARD'S** Railroad Laboratory to prevent floor damage by heavy lift trucks.

The elimination of shopping costs of numerous reflloorings represents an important savings to the railroads . . . but far **more** important is the fact that while other cars stand idle in the shops, **Standard-Equipped** cars are **on the line, producing profits.**

PROTECTIVE ARMOR FOR FLOORS

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RAILWAY EQUIPMENT MANUFACTURING COMPANY

GENERAL OFFICE: 4527 Columbia Avenue, Hammond, Indiana
New York · Chicago · St. Paul · San Francisco

**Standard** *Railway Equipment Manufacturing Co., (Canada) Ltd.*
Sun Life Building, Montreal

**R. A. MITCHELL, who has been appointed district engineer for the central district of the Air Brake division, Westinghouse Air Brake Company. Mr. Mitchell, service engineer in the district since 1948, will have headquarters at Wilmerding, Pa.**

central region in Chicago. Mr. McCandlish succeeds **S. H. Newburn,** recently appointed president of Air Reduction Canada, Ltd. **S. S. Bruce,** zone manager, eastern region, of the firm's railroad department, succeeds Mr. McCandlish as Chicago district manager.

**Louis Lenard,** assistant to vice-president in charge of the Equipment Specialties division of the **Union Asbestos & Rubber Co.,** has been named district sales manager of that division at San Francisco. **Robert M. Covert,** eastern district sales manager of the railroad sales division at New York, succeeds Mr. Lenard, with headquarters at Blue Island, Ill.

The **Republic Steel Corporation** has established a new division to coordinate sales of its high-strength steels. **Edward K. Waldschmidt** has been appointed manager of sales of the division, which is called the Hi Strength Steel Division, with headquarters in the firm's general offices at Cleveland.

The **Union Switch & Signal Division** of **Westinghouse Air Brake Company** has moved its Chicago office to 827 Railway Exchange building, 80 East Jackson boulevard.

**Arthur Z. Barnes,** Southwestern District sales manager for **General Cable Corporation,** has been elected assistant to president. Mr. Barnes, with headquarters in Dallas, also will be responsible for district sales offices in St. Louis, Kansas City, Memphis and New Orleans.

**Wilton G. Smith** has been appointed manager of the New York City export office of the **Hyster Company,** to succeed **A. E. Betts,** who is retiring after 25 years' service with Hyster.

# Securities

## Authorization

**NEW YORK, CHICAGO & ST. LOUIS.**—To issue a collateral promissory note for $2,600,000, proceeds to be used to retire some of the applicant's series A preferred stock. Division 4's report authorized sale of the note at par, with a 3% interest rate—the bid of First National Bank of Chicago. The note will be payable in 19 semiannual installments of $50,000 each from March 28, 1955 to March 28, 1964, with final payment of $1,650,000 due Sept. 28, 1964.

## Security Price Averages

| | July 6 | Prev. Week | Last Year |
|---|---|---|---|
| Average price of 20 representative railway stocks | 67.69 | 67.30 | 65.52 |
| Average price of 20 representative railway bonds | 95.04 | 95.01 | 89.93 |

## Dividends Declared

**ATCHISON, TOPEKA & SANTA FE.**—$1.25, quarterly, payable September 1 to holders of record July 30.

**BANGOR & AROOSTOOK.**—5% preferred, $1.25, quarterly, payable October 1 to holders of record September 7.

**CHICAGO, AURORA & ELGIN.**—liquidating, $2, payable July 20 to holders of record July 12.

**CINCINNATI INTER-TERMINAL.**—4% preferred, $2, semiannual, payable August 1 to holders of record July 20.

**CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.**—5% preferred, $1.25, quarterly, payable July 31 to holders of record July 9.

**RICHMOND, FREDERICKSBURG & POTOMAC.**—common, 75¢, quarterly; dividend obligations, 75¢, quarterly; both paid July 1 to holders of record June 21.

**WESTERN PACIFIC.**—75¢, quarterly, payable August 16 to holders of record August 2.

# Railway Officers

**BANGOR & AROOSTOOK.** — **Palmer H. Swales,** principal assistant engineer at Houlton, Me., has been appointed assistant to mechanical superintendent and assigned to special duties in the mechanical department. **Raymond H. Miller,** who has been on the staff of the engineering department since 1948, succeeds Mr. Swales as principal assistant engineer.

**Richard W. Sprague,** assistant director of the road's northern Maine news bureau, has been appointed assistant director of public relations, with headquarters as before at Houlton.

Mr. Sprague will continue also as assistant editor of the company magazine, "Maine Line."

**BOSTON & MAINE.** — **Hugh J. Conway,** head clerk, miscellaneous bureau of auditor of freight receipts office, has been appointed auditor of freight receipts, at Boston, succeeding **Faustin J. Tague,** who has retired after 47 years of service, for the last 20 of which he has been auditor of freight receipts.

**Kenneth M. Qua,** assistant general claim agent, has been appointed general claim agent at Boston, succeeding **Ralph T. Damon,** who has retired after more than 58 years of service, the last 40 as general claim agent. **Gordon W. Finney,** claim agent, succeeds Mr. Qua as assistant general claim agent.

**CANADIAN NATIONAL.**—**L. V. Lockhart,** assistant engineer, has been appointed assistant signal engineer—Western region, at Winnipeg.

**W. M. Shook,** district storekeeper

**William J. Mayo**

at Montreal, has been transferred to Transcona, Man.

**William J. Mayo,** superintendent, field committee on terminal performance, has been appointed superintendent of Montreal terminals.

**Reginald Hayes,** assistant vice-president, operations, at Montreal, has been promoted to vice-president and general manager of the Atlantic region at Moncton, N.B., succeeding **William E. Robinson,** who retired July 1, after 38 years of service. **Douglas V. Gonder,** general superintendent motive power and car equipment, Atlantic region, succeeds Mr. Hayes as assistant vice-president, operations.

A photograph and biography of Mr. Hayes were published in *Railway Age* March 16, 1953, page 27.

**John L. Toole,** assistant controller of Ford Motor Company of Canada, has been appointed assistant comptroller of the CNR at Montreal, succeeding **Stanley H. May,** retired. **Andrew Clarke,** auditor revenues, has been named assistant comptroller in charge of revenues at Montreal, succeeding **J. Harry Spence,** who has retired after more than a half-century of service.

**Howard C. Grayston,** manager of the Newfoundland district at St. John's, has been assigned to special administrative duties at system headquarters in Montreal. **William S. Ziegler,** assistant general superintendent at Winnipeg, succeeds Mr. Grayston as manager of the Newfoundland district.

**ILLINOIS CENTRAL.** — **L. B. Harper,** personnel assistant, has been named manager of safety at Chicago

The office of auditor of disbursements has been moved to 6327 Dor-

*(Continued on page 72)*

# NOW all these advantages of 360-CYCLE* TOOLS for

## • Grinding • Drilling • Vibrating • Sawing • Nut Setting • Tamping

**360-Cycle Tools Are More Powerful—Lighter.** These 360-cycle, 3-phase, 220-volt motor tools with rotor speeds as high as 21,600 rpm., are easier to handle, less tiring to hold. A 360-cycle 6" capacity portable grinder weighs only 3 lb. per hp. Equivalent pneumatic and other tools, from 5 to 15 lb. per horsepower.

**Do Jobs Faster.** 360-cycle tools work at full speed under all loads. Under full loads they slow down but 5%; other tools from 25% to 40%.

**First Cost Is Lower** per hp. (working capacity) for 360-cycle tools. First cost of a 360-cycle Enginator is decidedly less than that of an air compressor unit for pneumatic tools.

**Cost Less to Operate.** The cost to operate a 360-cycle tool is less than ⅓ that of an air tool. Upkeep is lower, too.

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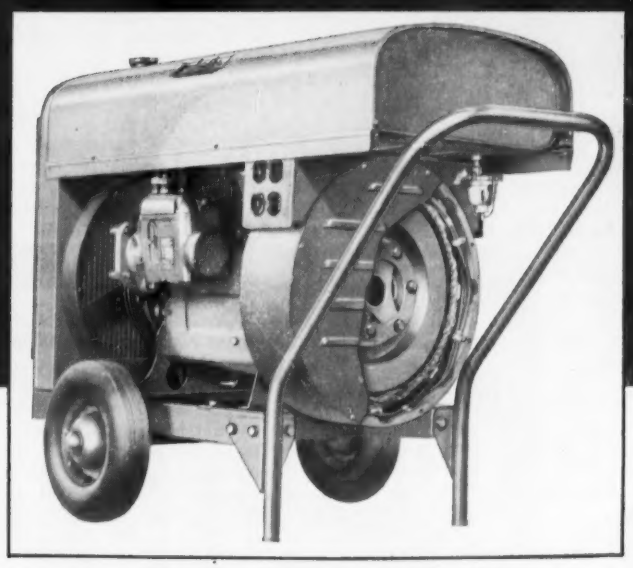
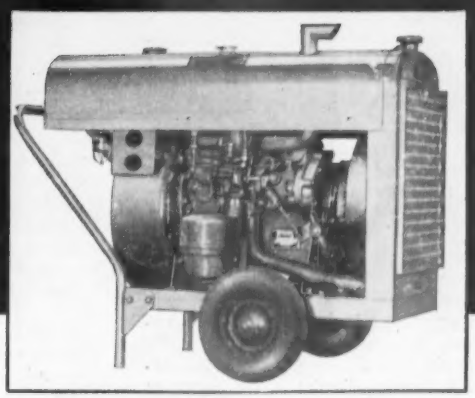
# WAUKESHA

## Portable 10 KVA 360-Cycle* Brushless ENGINATOR®





*(Left and above)*... Both sides of the Waukesha 360-cycle brushless Enginator complete unit. Note 5-gallon integral fuel tank, easy maneuverability features and compact, rugged construction.

Now you can fully utilize the many advantages of 360-cycle tools in maintenance-of-way and construction. Big enough for the job, readily portable, the Waukesha 360-cycle Enginator has 10 KVA capacity.

**The Waukesha Enginator Unit** is a brushless 10 KVA (8 KW), 220-volt, 3-phase, 360-cycle* generator (with 1500 watts 115-volt DC for lights and universal tools) driven without belts by a Waukesha ICK 4-cylinder, 4-cycle, 2½-in. bore x 3⅛-in. stroke, 61 cu. in., 2160 rpm gasoline engine, all mounted on a steel chassis with semi-pneumatic wheels and handlebar. Total weight—395 lbs.

**The engine,** for long life, is liquid cooled, rugged, light in weight. Cast aluminum head, crankcase, gear cover, intake manifold and generator housing. Cast iron cylinder block with Stellite inserts and Stellite faced valves. Built-in combination governor and coolant pump for forced circulation. Magneto and self-recoiling rope starter.

**The generator** has no brushes. Rotor is cast-aluminum with permanent magnets, mounted on ball bearings supported by quill from engine crankcase and driven through flexible steel disc coupling.

*Also available in 180-cycle.

### *Brushless Generator Features*

- **No brushes or slip rings to maintain**
- **No damage from short circuits or overloads**
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- **Revolving field permanent magnet type**
- **Not affected by moisture and dust**

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**WAUKESHA MOTOR COMPANY, WAUKESHA, WIS.**

*Largest Builders of mobile engine-driven Refrigeration and Generator Equipment*

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chester ave., Chicago 37, from 135 East Eleventh pl., Chicago 5.

**John A. Welsch,** superintendent motive power, has been promoted to general superintendent motive power at Chicago, to succeed **Albert G. Kann,** who retired June 1. Mr. Welsch began his IC career as call boy in

**John A. Welsch**

1916, later becoming machinist apprentice, machinist, foreman, master mechanic, shop superintendent, superintendent car department, and superintendent equipment (1948). He was appointed superintendent motive power in April this year.

**Philip A. Webb, Jr.,** general freight agent at New Orleans, has been advanced to assistant freight traffic manager at Birmingham, Ala., succeeding **Ted Warrell,** transferred to Jacksonville, Fla. Mr. Webb's successor is **Urbain J. Burvant,** general freight agent at Chicago, who in turn has been replaced by **Walter P. Schindel,** general agent at Pittsburgh. **Jack E. Andrews,** general agent at Indianapolis, succeeds Mr. Schindel, while **Cornelius R. Bode,** district freight agent at Jacksonville, replaces Mr. Andrews. **Andrew J. Moore,** assistant general freight agent at New Orleans, has been named general traffic agent there.

**Phillip H. Galloway,** trainmaster at Freeport, Ill., becomes manager of mail, baggage and express there and has been succeeded by **Mike C. Jacobs,** assistant trainmaster at Gibson City, Ill.

**J. S. Frost** has been appointed industrial agent at Chicago.

**KANSAS CITY SOUTHERN. — Hugh R. Lamb** has been named general agent at Little Rock, Ark.

**George H. McCright** has been named general tax commissioner and real estate agent at Kansas City, Mo., to succeed the late **J. J. Taylor.**

**LACKAWANNA. — William J. Wynne,** general agent at New Haven, Conn., has retired after more than 34 years of service.

**LONG ISLAND. — Philip H. Hatch** has been appointed general mechanical superintendent at Jamaica, N.Y. **Joseph J. Ortlieb,** acting superintendent motive power, has been appointed mechanical engineer. Mr. Hatch was born at Albany, N.Y., May 25, 1899, and attended Massachusetts Institute of Technology (B.S., 1921). He was a student engineer with General Electric Company at Schenectady, N.Y., during 1921-22; entered railroad service in 1922 as computer with the Cleveland Union Terminals, and joined the New Haven in 1923 as special apprentice. He was promoted to various

**Philip H. Hatch**

positions in the NH mechanical department, and served as general mechanical superintendent from November 1944 to April 1951. From June 1951 until his recent appointment on the LI, Mr. Hatch has been with the Locomotive and Car Equipment Department of GE at Erie, Pa. He served as consultant to the LI from January to April this year.

**MAINE CENTRAL. — Willard E. Pierce,** assistant superintendent of the Portland division and Portland Terminal Company, has been named superintendent of the MC's three operating divisions.

**MERIDIAN & BIGBEE. — W. Meade Fletcher** has been elected senior vice-president and secretary at Meridian, Miss.

**MIDLAND CONTINENTAL. — P. F. Giesking,** master mechanic, has been appointed master mechanic and chief engineer at Jamestown, N.D. The position of supervisor maintenance of way and structures has been abolished.

**MILWAUKEE. — Frank A. Shoulty,** superintendent car department at Milwaukee, will retire May 31.

**C. D. MacLennan,** chief clerk, claim department, at Seattle, has been named western freight claim agent there, succeeding **E. H. Suhrbier,** who died May 13.

**George M. Robson,** train conductor, has been appointed trainmaster at Milwaukee, succeeding **D. O. Burke,** who has been transferred to Deer Lodge, Mont.

**S. P. Elmslie,** division freight agent at Minneapolis, has been appointed general agent there, succeeding **H. E. Erickson,** who died May 25. **V. S. Rawson,** division freight and passenger agent at Davenport, Iowa, succeeds Mr. Elmslie, while **R. J. Casey,** traveling freight and passenger agent at Detroit, replaces Mr. Rawson.

**MINNEAPOLIS & ST. LOUIS.— Merle E. Eaton,** assistant to president at Minneapolis, has been elected vice-president and secretary there, succeeding **John J. O'Brien,** retired. Appointed as general auditor at that point is **G. H. Carlson,** comptroller.

**MISSOURI-KANSAS - TEXAS. — C. A. Birge, Jr.,** superintendent of the North Texas division at Denison, has been appointed to the newly created position of assistant superintendent of rules—safety, with the same headquarters. **O. L. Crain,** superintendent at Franklin, Mo., has been transferred to Denison to succeed Mr. Birge.

**N. A. Phillips,** secretary, at St. Louis, retired June 1, after 42 years' service. **A. M. Jacobs,** treasurer, has been elected also secretary.

**C. W. Watts,** division superintendent at Parsons, Kan., is retiring August 1, after 52 years of service. **C. T. Williams,** superintendent at Muskogee, Okla., has been transferred to Parsons. The Eastern, Northern and Southern divisions, comprising all lines north of Red river, have been consolidated into one operating territory, designated as the Northern division, with headquarters at Parsons.

**Fred McGee,** assistant freight traffic manager at Kansas City, has been appointed to the newly created position of assistant traffic manager at Tulsa, Okla., while **M. A. Hutson,** assistant general freight and passenger agent at Tulsa, succeeds him. Mr. Hutson's position has been abolished. Named as assistant freight traffic manager at Dallas, Tex., is **R. K. McDonald,** general freight and passenger agent at Fort Worth, who in turn has been replaced by **George C. Lay,** division freight agent at Dallas. Mr. Lay's successor is **W. D. Dennis,** general agent at El Paso, who is replaced by **E. H. Thaine.** Mr. McDonald succeeds **O. H. Griffin,** who has been promoted to assistant to president at Houston.

**MISSOURI PACIFIC. — J. C. Selover** has been named general agent at Sacramento, Cal., to succeed **F. C. Devine,** who retired June 1, after more than 31 years of service.

**MONON.—Eugene C. Rook,** has been appointed special assistant—industrial development, at Chicago.

**MUSKEGON RAILWAY & NAVIGATION CO.—A. W. Van Riper** has been appointed superintendent at

*(Continued on page 74)*

Day and Night
You'll Read 'em Right
with
**PRISMO**
REFLECTIVE
RAILWAY
MARKINGS

# SAVE 75%

***Better in every way—from every angle.***
***Reflects more, lasts longer (no peeling).***
***Easier to apply and costs less!***

**USE PRISMO for**

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- a moving billboard, advertising your road
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*Use your present personnel & equipment*

**PRISMO SAFETY CORPORATION**
HUNTINGDON, PENNA.


FOR ROLLING STOCK OR RIGHT OF WAY!

# FIR PLYWOOD

. . . saves time, labor, money. A proven material for car construction, concrete form work, new building, maintenance and repair. See your regular plywood supplier!

For any use exposed to weather, water, or unusual moisture conditions, be sure to specify Exterior-type fir plywood. The EXT-DFPA grade-trademark is your assurance of 100% waterproof bond.

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Muskegon, Mich., succeeding **J. E. Moran,** deceased.

**NASHVILLE, CHATTANOOGA & ST. LOUIS.—Kenneth M. Halloran** has been appointed freight traffic agent at Chicago, succeeding **T. H. Routenberg,** resigned.

**NEW YORK CENTRAL—S. C. Morse** has been appointed supervisor diesel records at Cleveland, and **R. H. Wright** has been named assistant supervisor diesel records.

**NEW YORK, SUSQUEHANNA & WESTERN.—Frank C. Kronauer,** vice-president and general manager at Paterson, N.J., has retired. **Otto C. Gruenberg,** superintendent motive power at Ridgefield Park, N.J., has been appointed general manager in charge of operations and maintenance of equipment. Mr. Gruenberg was born at Gary, Ind., August 1, 1897; attended Tri State College (B.S.M.E., 1921) and Harvard Business School (Railroad Administration, 1930) and entered railroad service in April 1922 as special apprentice with the Milwaukee. After service with the Boston & Maine and the American Locomotive

**Otto C. Gruenberg**

Company, Mr. Gruenberg became superintendent motive power of the New York, Ontario & Western in October 1940. He was superintendent motive power of the Susquehanna from October 1945 until his appointment as general manager, operations and maintenance of equipment.

**NORFOLK SOUTHERN. — John H. Grotheer** has been appointed general agent at Pittsburgh, succeeding **Earl C. Kolson,** resigned.

**NORFOLK & WESTERN.—Clyde Cocke,** purchasing agent at Roanoke, Va., has been named general purchasing agent. The title of purchasing agent has been abolished.

**G. W. Meredith,** master mechanic of the Pocahontas division at Bluefield W. Va., has been transferred to the Shenandoah and Radford divisions at Shaffers Crossing, Roanoke, Va., succeeding **Frank D. Veazey,** who has retired after more than 44 years with the N&W. **W. M. Tucker,** assistant master mechanic of the Pocahontas division, succeeds Mr. Meredith.

**NORTHERN PACIFIC. — M. W. Scott,** trainmaster at Spokane, Wash., has been appointed assistant division superintendent at Livingston, Mont., succeeding **F. G. Cook,** who retired June 1 after 44 years of service. Mr. Scott's successor is **R. C. Webb,** conductor at Tacoma, Wash.

**J. W. Watkins,** manager of accounting, has been appointed assistant to vice-president—oil development department, while continuing in his present capacity.

**E. L. Cates,** division storekeeper at Seattle, retired July 1, and has been succeeded by **R. L. Johnson,** who transfers from Duluth. Named as Mr. Johnson's successor is **A. W. Schneider,** storekeeper at Helena, Mont.

**PACIFIC ELECTRIC.—Roy L. Mankins,** general foreman, has been appointed to head the mechanical department, effective June 1, with the title of master mechanic, at Los Angeles. He will supervise maintenance of freight locomotives and other equipment and will succeed **E. A. Stevens,** general superintendent motive power, whose retirement was noted in *Railway Age* May 24.

**PACIFIC FRUIT EXPRESS.—E. F. McArdle,** traveling agent, has been appointed district agent at Omaha, succeeding **R. M. Cathers,** retired.

**PITTSBURGH & LAKE ERIE.—Edwin R. Crick,** accounting and valuation engineer at Pittsburgh, has retired after 21 years of service.

**PITTSBURGH & WEST VIRGINIA.—Daniel L. Jerman** has been appointed assistant chief engineer at Pittsburgh. Mr. Jerman was formerly employed by the Bechtel Corporation as structural engineer.

**R. E. Manning** has been appointed western traffic manager at Chicago, succeeding **E. L. Weaver,** who retired March 31 because of ill health.

**ROCK ISLAND.—Guy D. Larrabee,** assistant to general freight traffic manager at Chicago, has been named general freight agent there. **J. E. Edwards,** district freight agent at Moline, Ill., has been appointed acting assistant to general freight traffic manager at Chicago, replacing **N. P. Fuhs,** who is on leave of absence because of illness.

**SANTA FE.—J. W. Higgins,** valuation engineer at Amarillo, Tex., has been named system valuation engineer at Chicago, to succeed **Frank B. Baldwin,** who retired May 31 after more than 45 years of service. **G. W. Correll** succeeds Mr. Higgins.

**Raymond D. Shelton,** assistant

**ROCK ISLAND.—R. B. Smith, superintendent transportation, who has been named assistant to operating vice-president at Chicago *(Railway Age,* May 3).**

general manager at Los Angeles, has been appointed acting general manager there, succeeding **O. L. Gray,** who is on leave of absence because of illness. **E. O. Chaddock** has been appointed acting trainmaster at Carlsbad, N.M., succeeding **J. W. Barriger,** who has been transferred to El Paso, Tex. Named as car accountant of the subsidiary **Panhandle & Santa Fe** at Amarillo, Tex., is **D. M. Seeley,** who replaces the late **R. A. Love.**

**W. A. J. Carter,** trainmaster at Amarillo, has been appointed acting superintendent at Dodge City, Kan., to succeed **C. B. Kurtz,** who is on leave of absence. **A. K. Johnson,** assistant superintendent at San Bernadino, Cal., has been appointed acting superintendent at Winslow, Ariz., to succeed **S. Rogers,** on leave of absence.

**L. C. Hudson** has been appointed acting assistant general freight agent at San Francisco.

**SAVANNAH & ATLANTA.—John L. Strong,** secretary-treasurer-auditor at Savannah, Ga., has retired after 38 years of service. **M. W. Nease** has been appointed secretary and treasurer, and **T. D. Cook** has been named auditor. **M. L. Waters** has been appointed assistant treasurer and the position of assistant auditor has been abolished.

**SEABOARD. — W. R. Cox,** division engineer for the Carolina division at Savannah, Ga., has been transferred to the Alabama division at Americus, Ga., succeeding **C. R. Harrell,** who replaces Mr. Cox at Savannah.

**SOO LINE. — O. J. Andersen,** junior auditor of revenues, has been appointed auditor of passenger and station accounts at Minneapolis, and will assume duties formerly assigned to **H. P. Holt,** senior assistant auditor of revenues, who retired May 31 after

*(Continued on page 78)*


## NATIONAL OIL SEALS *help*

# *keep the roll* in roller freight

National Oil Seals are vital to the smooth, trouble-free operation railroads enjoy with roller bearing journal boxes. Mounted inside the journal box, these precision seals keep lubricant in—dirt, dust and water out. Uniform sealing is assured under all conditions, even winter blizzards, desert sand storms or immersion of the journal in water.

Like roller bearing journal assemblies themselves, National Oil Seals are rolling in over 85,000 freight car journal boxes; rolling millions of miles without malfunction or replacement. They are playing an important role in the success of roller bearing railway journals—and the elimination of costly hot boxes.

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**General Offices:** Redwood City, California. **Sales Offices:** Chicago, Cleveland, Dallas, Detroit, Downey (Los Angeles County), Milwaukee, Newark, Van Wert, Wichita. **Plants:** Redwood City, Downey and Long Beach, California; Van Wert, Ohio.

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## LINE IMPROVEMENT PROJECT

(*Continued from page 59*)

carrying the railroad over Blue Ridge road near the west end of the line relocation, a 14-ft by 12-ft concrete box culvert for use as an underpass, a double 10-ft by 14-ft concrete culvert, and a 6-ft by 8-ft concrete culvert. In addition, there will be a highway overpass carrying Porterfield road over one of the cuts.

The Big Blue river also will be a considerable factor in connection with the next phase of the project—the three-mile relocation between Dodson and Red Bridge. (See map). Whereas the old alinement follows a loop in the Big Blue the proposed relocated line cuts across the same loop, requiring two additional major bridges.

The work described in this article is being carried out under the general direction of W. H. Hobbs, chief engineer, Missouri Pacific System, and W. H. Giles, assistant chief engineer—construction. Construction is under suvervision of R. H. Carpenter, engineer of design.

**Here is a list of grading equipment used by the George Bennett Construction Company on the Missouri Pacific's line change project between Red Bridge, Mo., and Martin City:**

**One Model 80-D Northwest 2½-yd shovel**
**One Model 6 Northwest dragline with 3-yd Hendrix bucket**
**One ¾-yd Lorain shovel**
**Nine WD-60 Koehring Dumptors**
**Four DW-21 Caterpillar scrapers**
**Seven Euclid bottom-dump wagons**
**Two DW-20 Caterpillar wagons**
**Five Euclid rear-dump trucks**
**One 600-cu-ft Ingersoll-Rand compressor**
**One 630-cu-ft Joy compressor**
**Four D-8 Caterpillar dozers**
**One Model 12 Caterpillar motor patrol**
**Three TM-350 Joy wagon drills**
**One 403 Koehring crane**
**One 205 Koehring crane**
**One International TD-14 dozer**
**Two Ford A-frame trucks**
**Two LeTourneau sheepfoot rollers**
**One 210-cu-ft Worthington compressor**

## "BI-PARTISAN" PIGGYBACK

(*Continued from page 55*)

authorities. A motor common carrier who moves one of his trailers via the Katy pays a flat charge, based on length and weight of the trailer plus its cargo. The service offered regular rail patrons, on the other hand, can be improved by use of trailers of the Missouri, Kansas & Texas Transportation Co., a Katy subsidiary. These customers pay regular less-carload rail rates. Pick-up and delivery service is provided.

In its total impression the Katy's piggyback differs in many respects from, say, the New Haven's "Trailiner Service." The Katy will handle rail-billed freight; the New Haven does not. The New Haven serves private truckers as well as motor common carriers; the Katy, for the time being at least, does not.

The Katy's undertaking is substantially different, also, from the recently-suspended service proposed by a number of Eastern roads. Those roads filed special T-O-F-C tariffs. They planned to transport trailers on flat cars at prevailing motor common carrier truckload rates. Upon protest from the truckers, the Interstate Commerce Commission suspended the tariffs until January 15, 1955. Meanwhile, it will study the situation.

Discussing, recently, problems of piggyback service, the Katy's president, D. V. Fraser, observed that only one obstacle seems to stand in the way of T-O-F-C development on a large scale: Motor common carriers and the railroads "have not talked each other's language." The Katy president said many railroad spokesmen have led the public to believe there is no place in transportation for trucks, a stiuation he considers unfortunate. The key to a successful piggyback operation, he said, lies in establishing a workable agreement with the motor common carriers, while at the same time using the service to benefit the railroad's own customers.

The Katy's decision to begin piggyback operations on this bi-partisan basis was made after the road conducted "exhaustive surveys."

Theo. F. Behler, who heads the Katy program, talked with over-the-road truckers to gage their interest in the proposed service. Ten out of 11 major truck companies contacted were "definitely and actively interested." Mr. Behler analyzed truck costs in the road's territory, and his studies showed piggyback would be attractive, cost-wise, to motor common carriers, because their road operating costs are several cents per mile higher than comparable rates charged for the proposed service.

Operation of the Katy T-O-F-C service, including contacts with motor common carriers, is handled by the MK&T Transportation Co. As vice-president in charge of this subsidiary, Mr. Behler is responsible for its operating details. In addition, he serves as liaison officer between the railroad and the truckers.

The Katy expects to develop an even flow of traffic with the new service, without peak and valley fluctuations. A motor carrier using the service will have to plan his operating pattern and especially equip his trailers for flat car movement. "We think he will develop ways and means to provide regular trailer movements," Mr. Behler said. There is the possibility that a motor carrier may, in some cases, consider piggybacking a standby service, and use it only on peak traffic days. Mr. Behler feels the Katy will get some traffic this way. But he is optimistic. "The average of such levelling among a group of carriers," he said, "will help provide the railroad with a steady flow of traffic."

The 344-mile Kansas City-Oklahoma City segment was selected as the starting point for Katy piggyback service because it combines factors which the road's management considers necessary for successful development. Train schedules require less adjustment. Local terminal facilities could be modified at small cost. Elapsed time for movement of trains over the segment is very near truck running time, and volume of traffic is high enough to make the operation attractive.

Initially, piggyback cars are being handled in regular freight train service. Some tailoring of schedules may be in the offing. The Katy is using 20 of its own 40-ft, 11-in. flats to begin the service, and expects to lease truck trailers as required for its portion of the business.

# There's no easy way to learn his job

*He's the Communications Supervisor—his business is the intricate nerve system of the railroad. He works with complex arrangements of equipment to make railroading safer, more efficient . . . more rewarding to all.*

He's usually called the Communications Supervisor. But you may know him best as an engineer . . . or as the man who gets results in emergencies! Or perhaps as a planner, weighing the demands of a distant day. For the Communications Supervisor is all these things. He *lives* railroading, and he knows what it takes to keep the communications of a modern railroad in a state of healthy growth.

He pits new equipment against the old—and decides when the old must give way. With an eye to economy, he adapts his circuits to handle traffic undreamed of a few years ago. Under his hands, a far-flung communication network keeps pace with the changing needs of an entire railroad system.

He knows railroading, and he knows communications; his recommendations save men, money and materials. But he can never stop learning—for new developments appear continually. *Which* of them will add to safety, efficiency, competitive advantage? And how does *this* equipment rate with *that?* . . .

At one time or another, the Communications Supervisor probably comes to Automatic Electric for product information and counsel. He knows Automatic Electric as maker of the P-A-X Business Telephone Systems (now owned by forty-two railroads)—a quick automatic telephone service, exclusively for the railroad's business, using the railroad's own circuits. He probably has expanded circuits inexpensively with Lenkurt telephone and telegraph carrier—because more than three-fourths of all railroad carrier equipment in the U.S.A. is Lenkurt, supplied by Automatic Electric. And he knows he can turn to this nation-wide organization for Intra-Train Telephone Systems—for Railroad Telephones—for a complete line of communications supplies.

During the past forty years, Automatic Electric has worked with hundreds of Communications Supervisors—whatever their titles might be! The very real contributions made by these men have set the pace for progress in railroad communications.

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## SPECIAL DEVICE CARS

*(Continued from page 54)*

handled in special equipment, is a problem. He says, however, that he just has to hold onto all the traffic he can get, and that somehow his railroad's operating department is going to have to figure out ways to handle it less expensively. He too likes the collapsible rack, container, etc., as a solution to cutting the expense of handling the auto parts trade.

There is considerable evidence that carriers are giving increasing attention to cutting turnaround time on all cars, including special equipment. The attention given in the last few years to improving yards and terminal work is one indication of the truth of this statement. Presently under consideration, too, is a proposal to re-study the effect on turnaround time, and service generally, of running shorter and more frequent trains.

Interestingly enough, the suggestion has been made quite seriously that perhaps the answer to all freight car problems, and not just those of special equipment, may not lie in improved turnaround time at all, but in a larger freight car fleet. Admittedly, this is a highly speculative thought. But it is based on the proven idea that the smallest inventory is not always the most economical one for a producer. Since freight cars are a large part of the railroad's production inventory, it is thought that this theory *may* apply to the railroad industry. It will be interesting to see what, if anything, comes of this thought.

In any event, the years ahead promise some interesting developments as the railroads try to find how to balance good utilization of equipment with the desires and needs of their customers for cars which, though largely "one-way" in service usefulness, save the shipper money and time in packaging and in loading.

---

32 years of service. The positions of junior auditor and senior assistant auditor of revenues have been abolished. **J. R. Koch** has been appointed auditor of freight accounts in place of auditor of revenues, which position has been abolished. **W. C. Nelson** has been named assistant auditor freight accounts, and will assume duties formerly assigned to Mr. Andersen.

**SOUTHERN PACIFIC.**—**H. D. Fifield** has been appointed manager of contract department at San Francisco, succeeding **H. E. Smetts,** who retired July 1.

**TENNESSEE CENTRAL.**—Following the retirement of **J. T. Waddell** as general superintendent, and **H. R. Manby** as chief engineer, the positions of general superintendent and chief engineer at Nashville, Tenn., have been consolidated, with **W. E. Manning** being named general superintendent-chief engineer.

**TEXAS & NEW ORLEANS.**—**Harold Scherer,** assistant general freight agent at New Orleans, has been advanced to general freight agent there to succeed **W. H. Stakelum,** who has retired after 49 years of service. Mr. Scherer's duties have been assumed by **H. L. Daughenbaugh,** who also has been assistant general freight agent at New Orleans. Named as assistant to freight traffic manager at Houston is **C. W. Murrell,** district freight and passenger agent at Lake Charles, La., who has been replaced by **H. G. Oliver. W G. Crosby** becomes assistant general freight agent—divisions at Houston, to succeed **J. D. Blocher,** who retired July 1.

**T. C. Montgomery,** manager of personnel at Houston, retired June 30 and has been succeeded by **E. B. Kysh,** first assistant manager of personnel there, who in turn has been replaced by **T. S. Stewart,** second assistant manager of personnel.

**WABASH.**—**Sidney King,** freight traffic manager at St. Louis, retired July 1. **R. B. East,** general agent at Salt Lake City, has been advanced to assistant freight traffic manager at St. Louis, while **Lawrence H. Willson** succeeds him. **Joseph W. Tilton** becomes general agent at Memphis, replacing **Oscar Plunket,** retired. Named as division passenger agents at Toledo and Decatur, Ill., respectively, are **Fred E. Greathouse,** city passenger agent at Kansas City, and **Glenn F. Welker,** city ticket agent at Detroit. Mr. Greathouse succeeds **C. H. Lorenz,** who retired July 1, while Mr. Welker replaces **Harvey P. Gardner,** also retired. Appointed as district passenger agent at St. Louis, to succeed **L. C. Fehlber,** who is retiring, is **Gilbert E. Paul.**

**WESTERN PACIFIC. — Myron M. Christy, executive assistant at San Francisco, who has been appointed assistant to president — management services at that point.**

**WESTERN PACIFIC.**—**Henry R. Fegley,** assistant to general manager at San Francisco, has retired under the company's retirement plan. **K. V. Plummer, Jr.,** has been appointed acting assistant superintendent transportation at San Francisco, succeeding **W. M. Foster,** deceased. The position of superintendent perishable service, formerly held by Mr. Plummer, has been abolished, but Mr. Plummer will continue to exercise jurisdiction over perishable matters.

### OBITUARY

**Fred M. Ford,** assistant general freight agent of the **Monon** at Chicago, died in that city June 27.


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and so very much more

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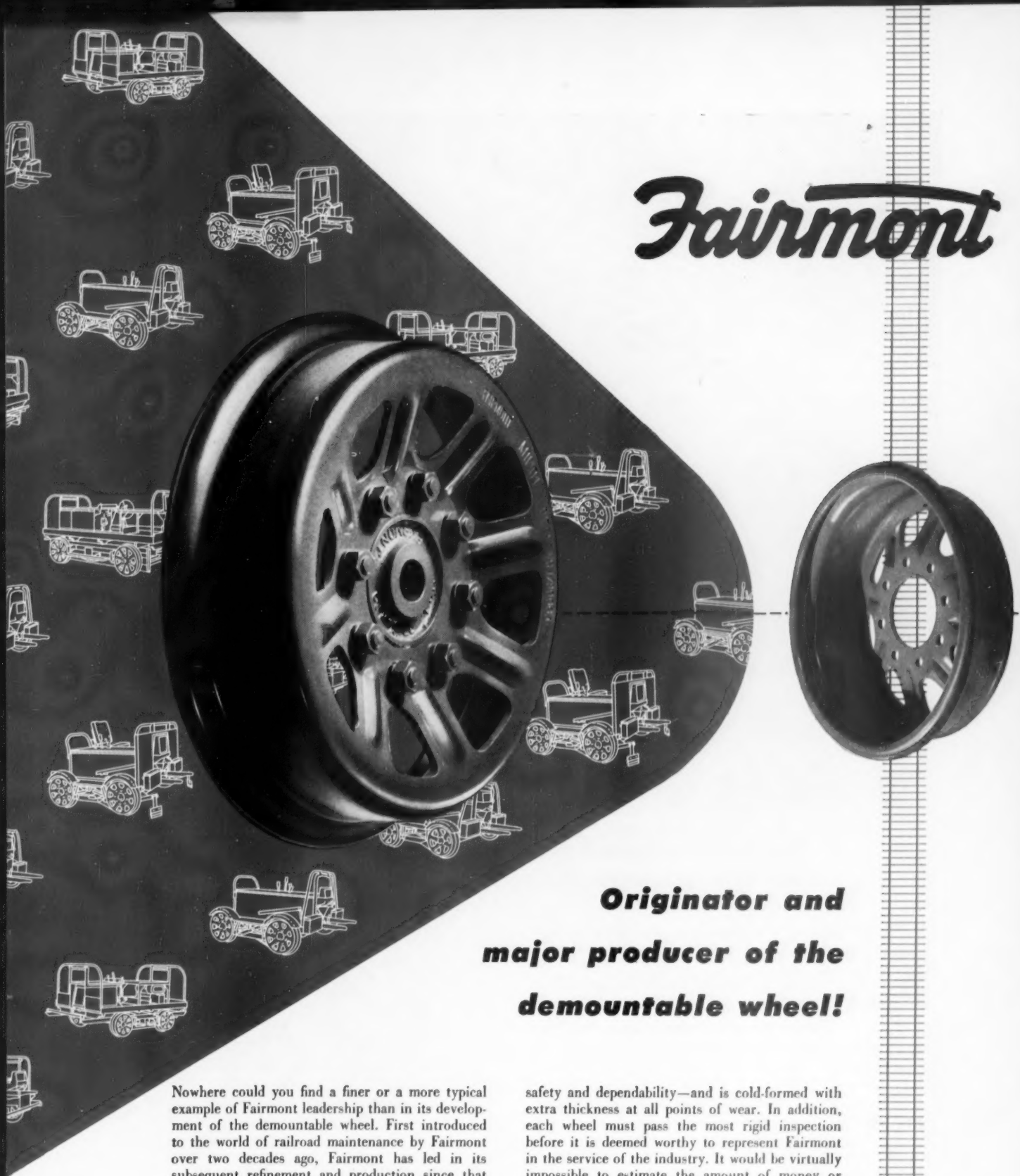

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## *Originator and major producer of the demountable wheel!*

Nowhere could you find a finer or a more typical example of Fairmont leadership than in its development of the demountable wheel. First introduced to the world of railroad maintenance by Fairmont over two decades ago, Fairmont has led in its subsequent refinement and production since that day. Such was the thoroughness and soundness of Fairmont's research and testing that the American Railway Engineering Association selected the basic Fairmont design as their standard for the industry. The Fairmont wheel is purposely engineered and built to provide the greatest possible safety and dependability—and is cold-formed with extra thickness at all points of wear. In addition, each wheel must pass the most rigid inspection before it is deemed worthy to represent Fairmont in the service of the industry. It would be virtually impossible to estimate the amount of money or human effort that has been saved by this Fairmont development. It does, however, point up this significant fact: Fairmont is the undisputed leader in the design and production of the demountable wheel . . . and the one logical source to which you should look for this important product.

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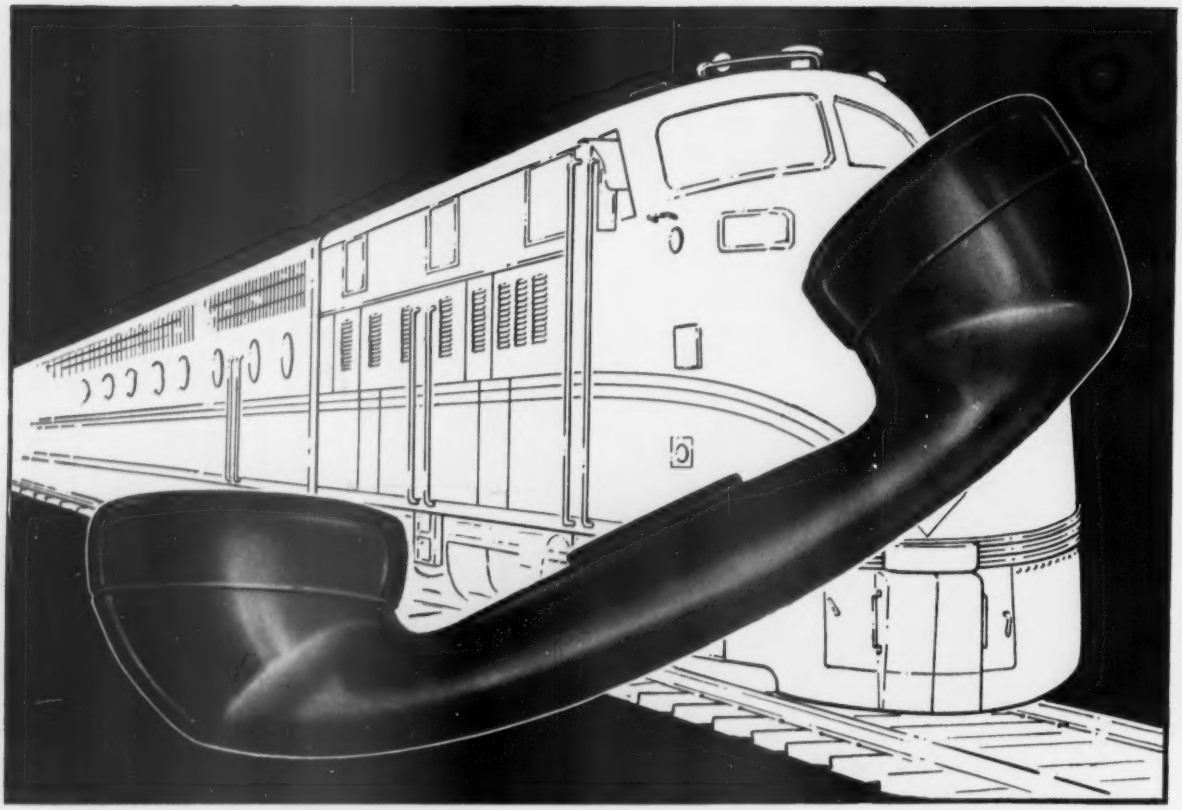

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**Field tested for over a year... this revolutionary radio unit is now in service on several major railroads.**

It's the first of its kind . . . this direct connected radio power supply that eliminates costly converters. It operates directly from the Diesel starting battery.

This new Bendix development means a saving in original cost from $200 to $600 per radio installation.

Proved in the field to be dependable, efficient and amazingly free of maintenance.

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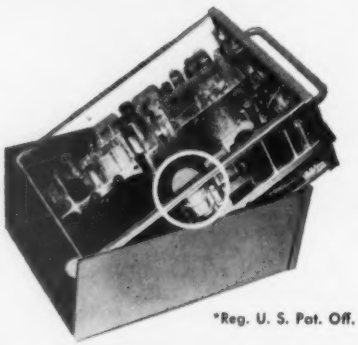

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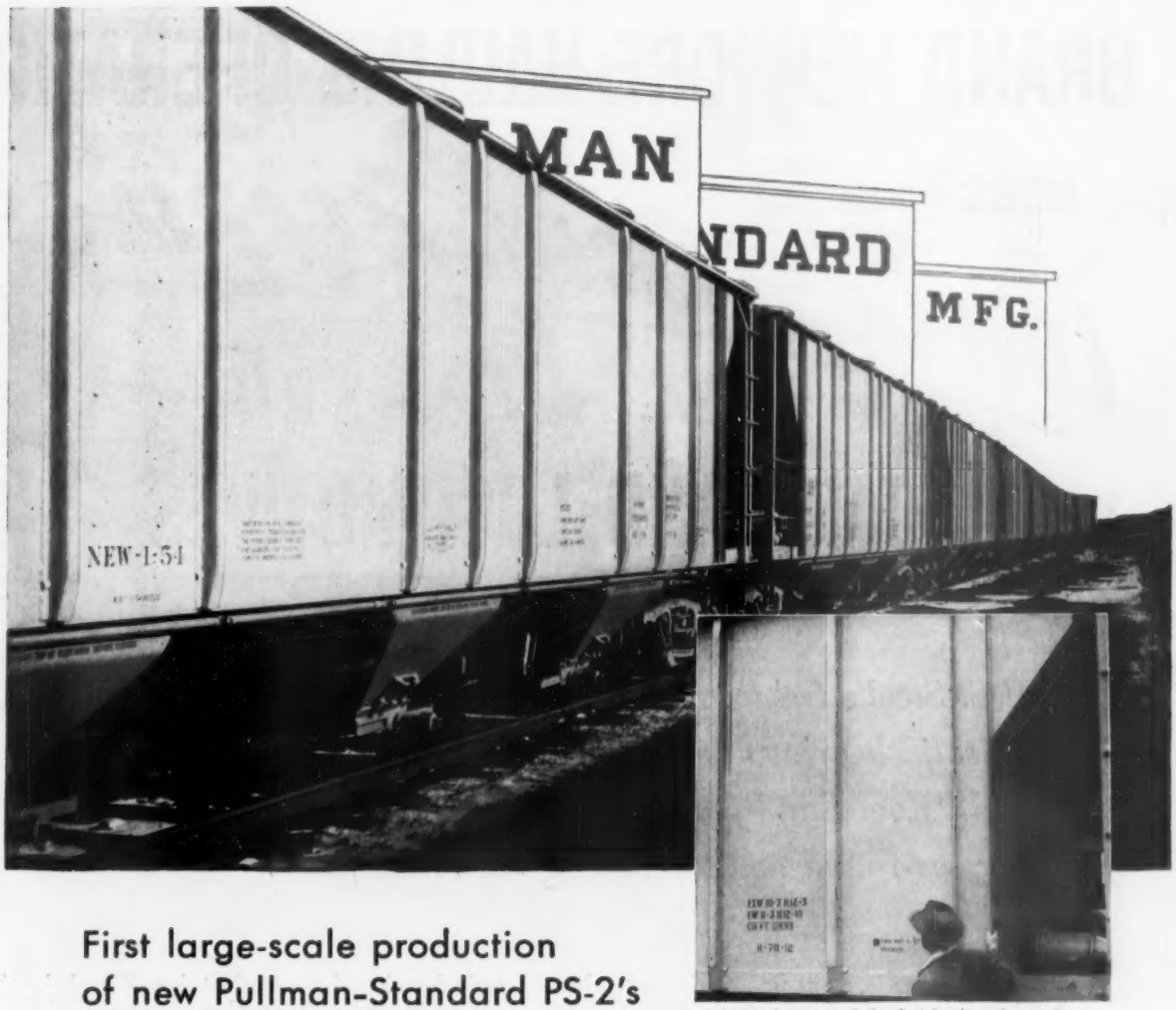
Canadian Distributor: Aviation Electric, Ltd., 200 Laurentian Blvd., Montreal, Quebec.

Bendix Radio




Inspecting one of the first large-scale production run of 225 PS-2 covered hopper cars produced at the Pullman-Standard, Butler, Pa., shops.

## First large-scale production of new Pullman-Standard PS-2's **finished with buyer-specified CARCLAD.**

Displayed on Pullman-Standard's PS-2 exhibit car, long-lasting Sherwin-Williams CARCLAD finish was also specified by the buyer, for the first production order of 225 of these modern, covered hopper cars.

Developed especially for covered hopper car service, CARCLAD eliminates need for many repaintings that would otherwise be required. CARCLAD-finished hopper cars have been in operation, without need for repainting, for 5 and 6 years . . . and more!

CARCLAD produces these money-saving benefits because it is virtually unaffected by conditions that ruin hopper car appearance and serviceability. CARCLAD resists oil, grease, brine, alkalies, strong acids and many other corrosive chemicals that are commonly carried. It stays on the car despite weather extremes, scrubbing and cleaning operations, and even when sledge hammer pounding is needed to loosen loads. Ask for full details and actual performance records in service. Address The Sherwin-Williams Co., Transportation Division, Cleveland 1, Ohio.

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**RAILWAY FINISHES**

# BRAND NEW ORE-HAULING OPERATION

## uses *LOW-COST SOLID BEARINGS*

## for ALL CARS AND LOCOMOTIVES

*U.S. Steel's Orinoco Mining Company standardizes on solid bearings with "Twinplex Alarm" and "Kool-End" features for all equipment in year-round non-interchange ore movement.*

DOWN in Venezuela, a new ore-gathering system has just been completed by Orinoco Mining Company, covering 90 miles from ore fields in the Cerro Bolivar area to ore-conditioning plant and docks at Puerto Ordaz. Initial equipment orders called for 560 100-ton cars and 9 1600 h.p. B-L-H diesel-electrics — *all solid bearing equipped.* Orinoco expects to move 3,000,000 tons in 1954 — eventually plans operation of 125-car units. Short runs will permit rapid turnarounds, and cars will make upwards of 25,000 miles per year when operation is in full swing.

Orinoco chose solid bearings principally because of their low initial cost and the ease and economy with which they can be maintained. Dimensionally, the car journal bearings conform to standard AAR specifications for 6½" x 12" journals. They differ in that each is equipped with smoke and odor alarm cartridges for early detection of any overheated condition before it can become serious. The car bearings also have "Kool-Ends"—a thicker babbitt surface for both contact ends to reduce journal friction and provide cooler operating temperatures.

### ATA Bearing Design for Locomotives.

Orinoco diesel-electrics use an ATA journal bearing design. These bearings are interchangeable with standard AAR bearings but different in that there's a deep side wall construction, providing greater journal-to-bearing contact area and preventing journals from rolling out from under the bearings. ATA bearings hug the journals — even during impacts such as occur whenever cars are "bunched" for any reason. Like the car bearings, these locomotive journal bearings also have "Twinplex" smoke and odor cartridges and "Kool-Ends."

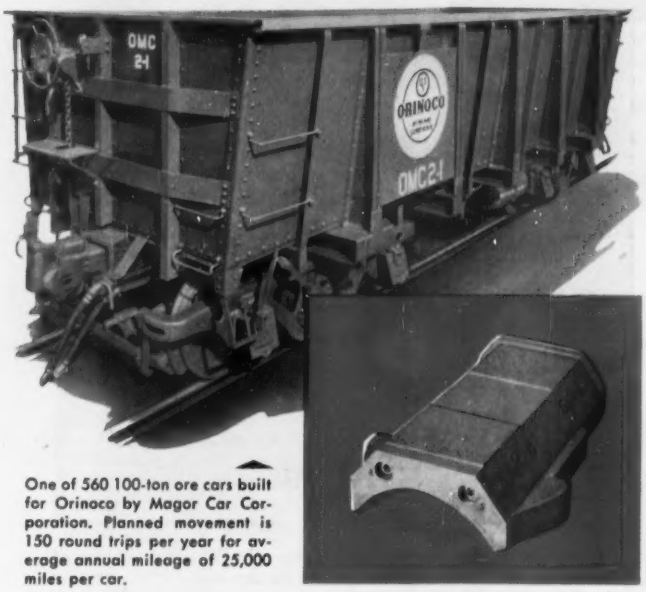
## Freight Car Bearing Performance

The figures at the right clearly indicate a trend to improved journal bearing performance, even with today's faster train speeds and heavier loads.

Higher standards of maintenance and inspection, combined with selective adoption of available developments, can continue to improve solid bearing performance — to the point where the incidence of hot boxes may be reduced to insignificance.

| PERIOD | TOTAL CAR MILES | CAR MILES PER HOT BOX | % INCREASE OVER 1951 |
|---|---|---|---|
| 1951 | 34,726,490,070 | 172,703 | — |
| 1952 | 34,313,975,558 | 190,109 | 10% |
| 1953 | 34,355,017,965 | 219,762 | 27% |

# now under way in Venezuela




One of 560 100-ton ore cars built for Orinoco by Magor Car Corporation. Planned movement is 150 round trips per year for average annual mileage of 25,000 miles per car.


Map showing route of ore cars from mine area to ore conditioning plant and port at junction of Orinoco and Caroni Rivers. Orinoco River was dredged to this point to permit operation of sea-going vessels. Total length of system is about 90 miles—with heavy movement down grade.

At left is car journal bearing like those applied to Orinoco cars. Size is 6½" x 12"—keeping maximum bearing loads well within recommended limits.


First of 9 B-L-H 1600 h.p. diesels with which Orinoco is beginning operations. Note six wheel trucks have standard boxes for solid bearings.

### How Twinplex Alarm Bearings Work.

Twinplex Alarm Bearings provide a positive means of early detection of any overheated bearing condition. The smoke and odor cartridges are inserted in holes drilled longitudinally through the bearing back. Each cartridge is sealed with fusible metal that melts if temperatures of 350° F. are reached for any reason. When this happens, for a period of about 8 minutes one cartridge releases a heavy pungent odor (ethyl mercaptan) and the other a dense white smoke.

Ask us to give you complete details about Twinplex Alarm Bearings and other Magnus developments for improved freight car performance. Just write to Magnus Metal Corporation, 111 Broadway, New York 6; or 80 E. Jackson Blvd., Chicago 4.

**MAGNUS**

# Solid Bearings

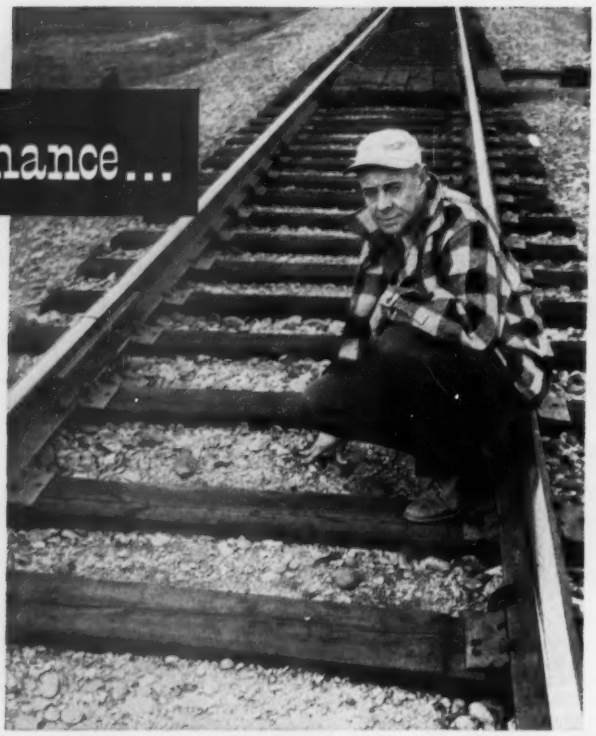
*Right for Railroads*

*...in performance...in cost*


**MAGNUS METAL CORPORATION** *Subsidiary of* **NATIONAL LEAD COMPANY**

# Here's Proof of Performance...

## Union Pacific tests Pressure-Creosoted Douglas Fir Ties... 2000 of 3000 in track *after 31 years*



**W. L. SPITTLER**, Union Pacific roadmaster, checks the condition of pressure-creosoted Douglas Fir ties in the test section on the main line east of Boise, Idaho.

IN 1923, the Union Pacific Railroad began tests of pressure-creosoted ties in its mainline track. In the vicinity of Milepost 431.70—approximately 18 miles east of the Boise, Idaho, station—3000 Douglas Fir ties were installed. They had been treated at the Union Pacific's Pocatello treating plant by the Lowry process with 8 pounds retention.

Today 2000 of these Douglas Fir ties are still in track, with most of the removals due to splits and rail cuts.

The performance of Creosote as a wood preservative is documented by tests like this. Time and again it has been proved that Creosote will keep ties serviceable longer than their normal mechanical life.

And for the best possible performance, make sure your treating plant uses USS Creosote. Here is a uniform product, the result of continuous processing in the plants of United States Steel. For complete information, contact our nearest Coal Chemical sales office or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

**A UNION PACIFIC TRAIN** passes over the test section. After more than 30 years in track, 2000 of the 3000 original ties are still in use.

**USS CREOSOTE**

4-495

UNITED STATES STEEL

A "Secret" Weapon No One Can Steal! By Hungerford


We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or as a set for your personnel magazine, if you

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PITTSBURGH, PA.

*Serving America's Railroads*

ROLLED STEEL TIRES
with ROLLED STEEL WHEELS
AND DRAFT GEARS

"ASF 1940" 50-ton test car, shown at Hammonton, N. J., where the short-travel coil springs were replaced with Ride-Control Packages for the return trip to Atlantic City.

Another test car in the train—identical with this car—was mounted on ASF Ride-Control Trucks. Both test cars contained specially designed accelerometers for measuring impacts.

An "operations car," with impact-recording instruments, and two passenger cars were located in such a way as to isolate the two test cars from each other and from undesirable influences of the locomotive.

**Eliminating a major cause of lading damage—**
***in 12 minutes or less!***

**Jack up the car—remove old AAR coil springs . . .**

**and slip in the self-contained Ride-Control Package.**

**Car now has the smooth-riding qualities that are possible *with long spring travel . . . controlled by constant friction.***

**You reduce lading damage claims when you reduce the lading damage index... and the Atlantic City test runs prove how**

# ASF Ride-Control Packages cut lading damage index 90% or more!

The ASF Test Train, on its Atlantic City runs, proved conclusively that railroads no longer have to put up with the costly use of hard-riding freight cars.

We're referring, of course, to cars built before ASF Ride-Control® Trucks were first introduced in 1944; cars good for further service, except for the old 1936 short-travel springs that pound the daylights out of the lading, the roadbed and the car itself.

On a typical test run, the "ASF 1940" test car was mounted on short-travel springs for a 28-mile run. Maximum speed was 56 mph. For the *return* trip, the car ran on ASF Ride-Control Packages—*at speeds up to 84 mph.* Here are the actual test results... comparing the riding qualities of the same car carrying the same load on the same track... *with just one quick change in the springing:*

**Impact Count—car outbound with short-travel coil springs**

| | | | | |
|---|---|---|---|---|
| 10,908 | .25G | 4894 x 1 | — | 4,894 |
| 6,014 | .50G | 3631 x 4 | — | 14,524 |
| 2,383 | .75G | 1667 x 9 | — | 15,003 |
| 716 | 1.00G | 716 x 16 | — | 11,456 |
| | | Lading Damage Index | — | **45,877** |

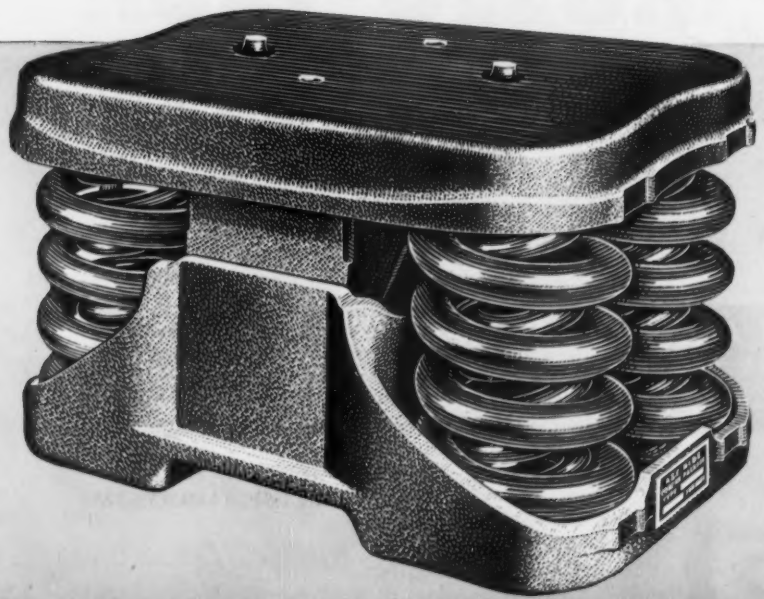
**Impact Count—car inbound with ASF Ride-Control Packages**

| | | | | |
|---|---|---|---|---|
| 2,699 | .25G | 2590 x 1 | — | 2,590 |
| 109 | .50G | 100 x 4 | — | 400 |
| 9 | .75G | 7 x 9 | — | 63 |
| 2 | 1.00G | 2 x 16 | — | 32 |
| | | Lading Damage Index | — | **3,085** |

In short, lading damage index reduced 93% *—even though the Package-equipped car was run at 84 mph.* Eliminate the harmless .25G impacts, and the reduction is almost 100% ... another way of saying that there's hardly any comparison between the "before and after" riding qualities of the same car!

**Prove it on your line...specify Ride-Control Packages for your older cars. Watch claims and car maintenance costs go down, while the number of cars available for unrestricted use goes up! Your ASF Representative can give you complete facts.**

## Bring your old freight cars up to modern riding standards... with the



ASF

## RIDE-CONTROL PACKAGE

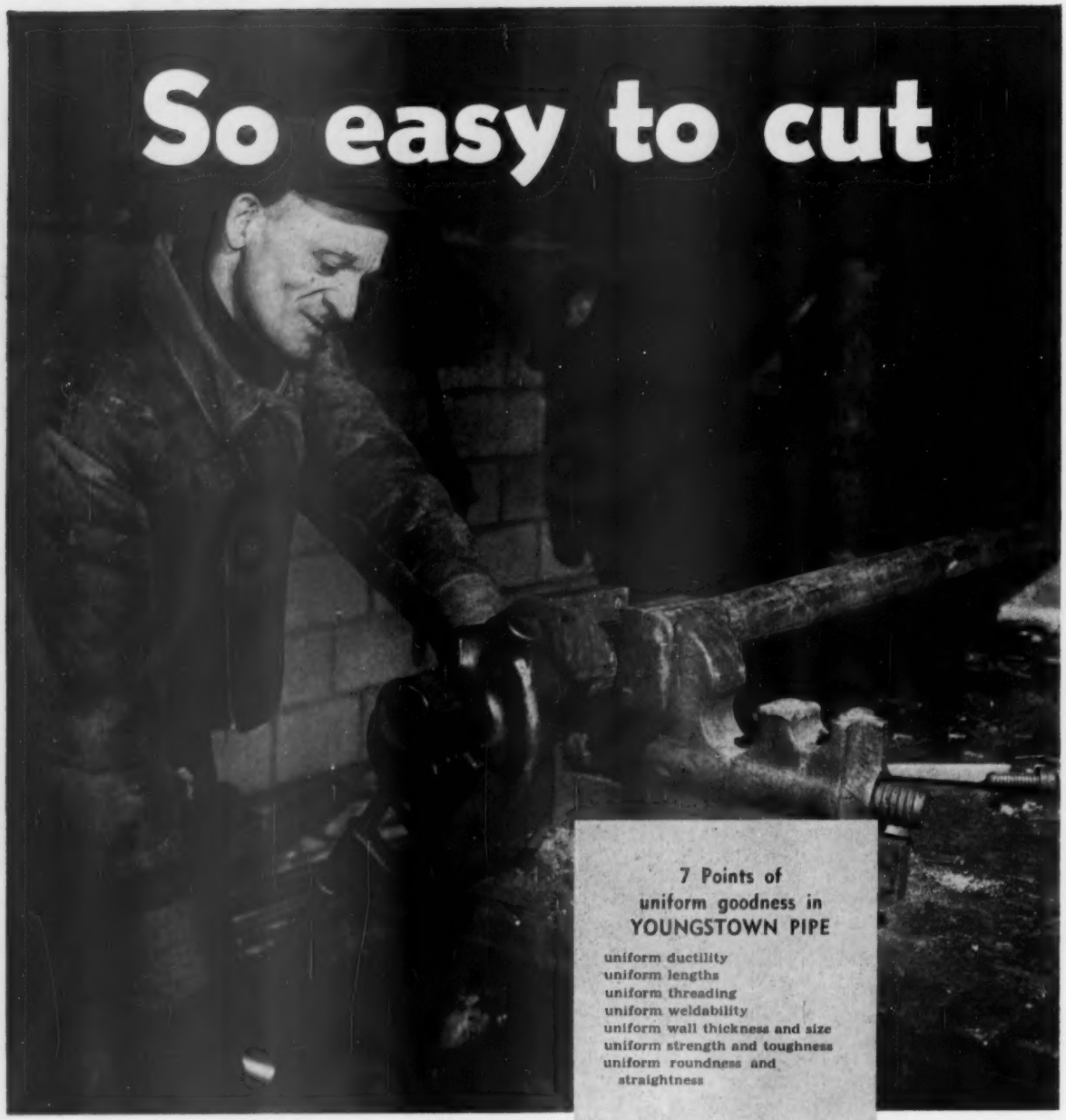
**AMERICAN STEEL FOUNDRIES**

410 N. Michigan Avenue, Chicago 11, Illinois

*Look for this MINT ◯ MARK on the running gear you specify*

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

# So easy to cut



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uniform weldability
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uniform strength and toughness
uniform roundness and straightness

● Youngstown pipe is plenty tough—but it's not tough to cut. A few turns of the cutter and the job is done—fast, clean, perfect! You save installation time when you work with Youngstown pipe.

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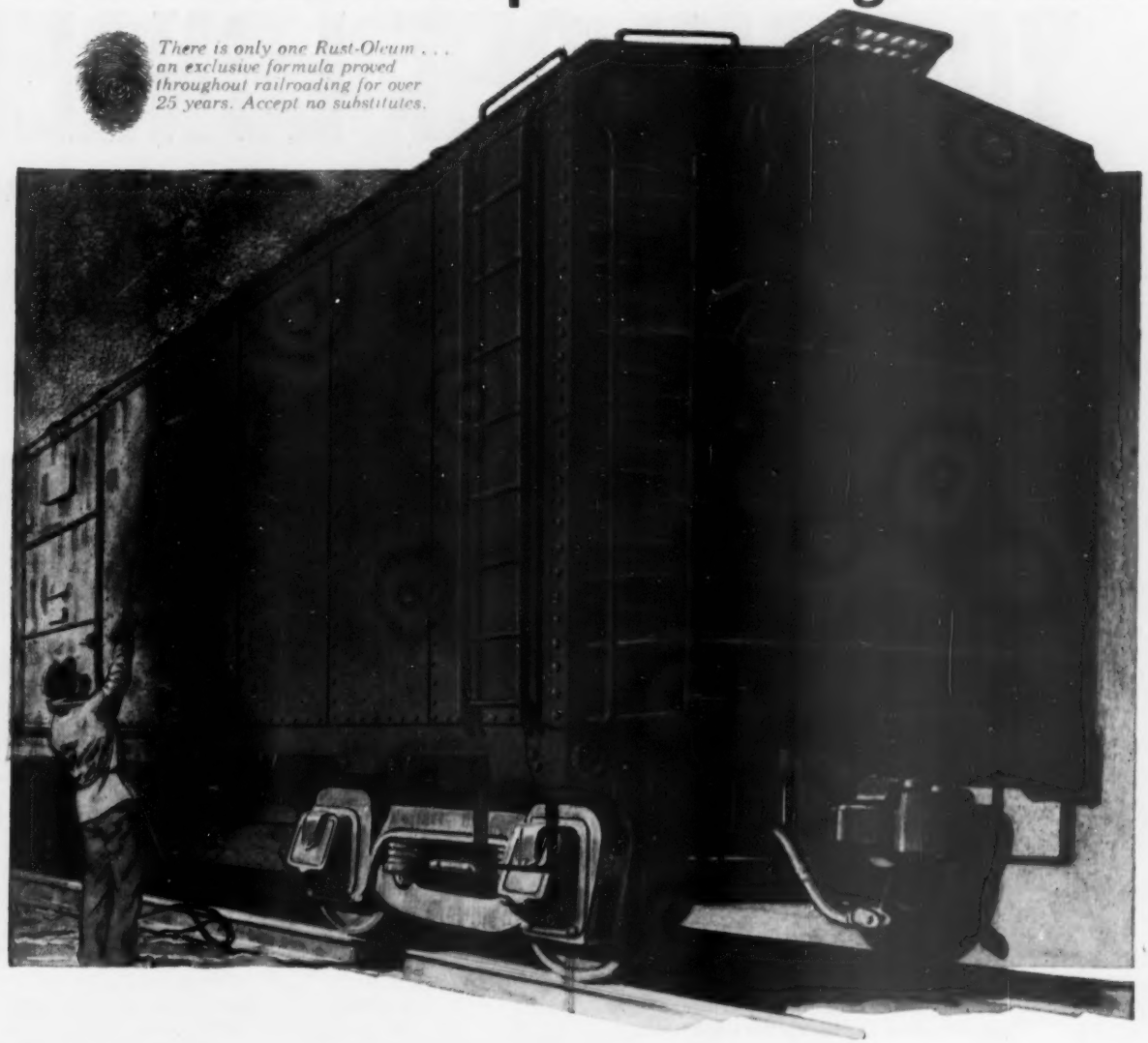

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## because of major design improvements

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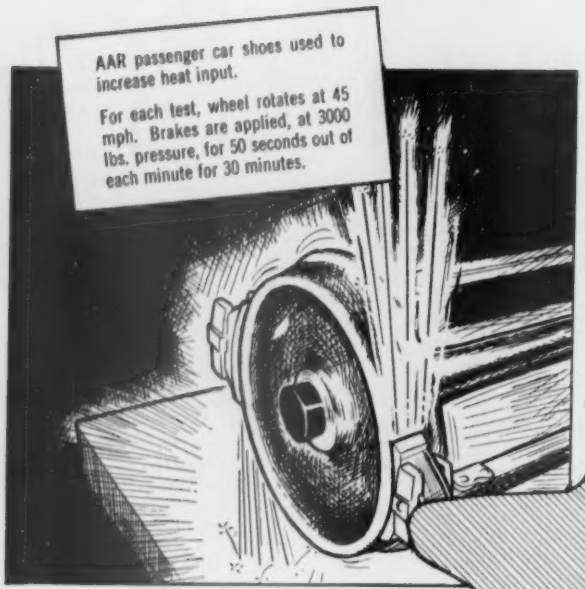
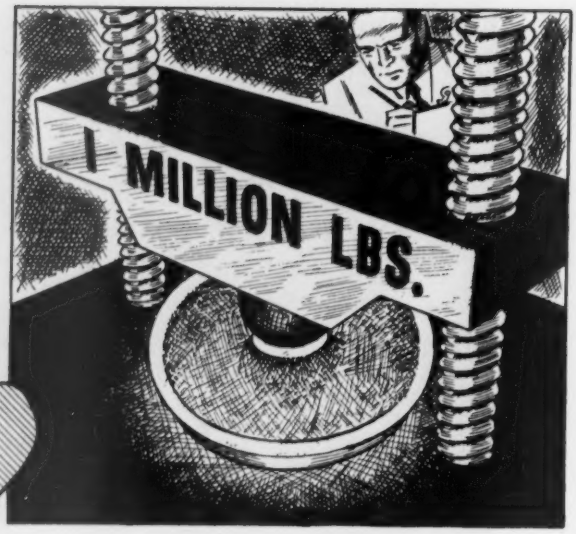
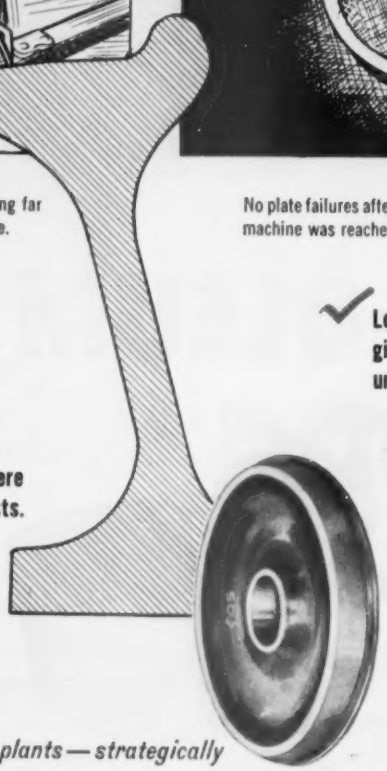



No thermal failures—after 10 drag tests representing far tougher conditions than ever found in freight service.




No plate failures after the capacity of the static plate testing machine was reached—1 million pounds on the back hub.

- ✓ **No flange failure—after loading of over 600,000 pounds.**
- ✓ **No thermal cracks during unusually severe thermal and drag tests.**
- ✓ **No rim failures—after heavy impact tests.**
- ✓ **Long, sweeping fillets give stronger support under flange and rim.**
- ✓ **Heavier plate gives a greater factor of safety.**
- ✓ **No plate failure—with static load of 1,000,000 pounds.**

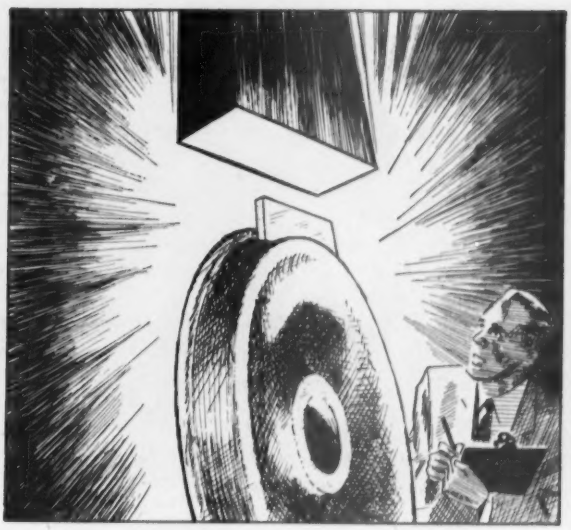


*Eleven modern plants—strategically located for service:* Tacoma

# WEARING CAR WHEELS THE GRIFFIN EQS

## and the toughest tests prove it!


No flange failures—during test in which the flange was subjected to a static load of over 600,000 pounds.



No rim failures—after heavy impact tests. Multiple blows were directed at the same spot—1" from outer face of rim.

**SPECIFY THE**

**GRIFFIN EQS** **ELECTRIC QUALITY STEEL**

**GRIFFIN WHEEL COMPANY**

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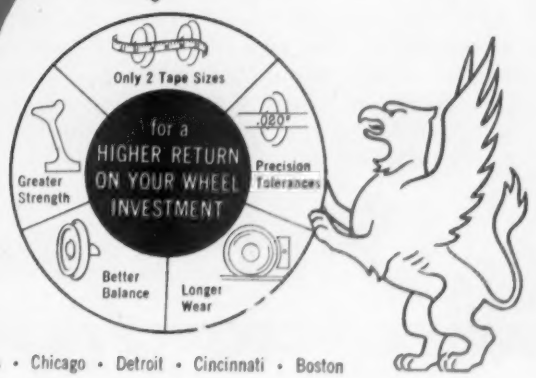


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# Pennsylvania Railroad Uses Pittsburgh Alkali- and Acid-Resistant CARHIDE

to provide better and longer-lasting protection on fleet of new covered hopper cars.


Part of the large fleet of new covered hopper cars recently painted with alkali- and acid-resistant CARHIDE in the Butler, Pa., shops of the Pullman-Standard Car Manufacturing Company.

**Add the Pennsylvania** to the long list of railroads using Pittsburgh's alkali- and acid-resistant CARHIDE to prolong the appearance and serviceability of covered hopper cars.

**This type of CARHIDE provides** extra years of protection against the effects of cargoes which quickly destroy ordinary finishes. Many hundreds of cars on which it has been used have shown that such ladings as soda ash, sulphur, phosphates, strong acids, alkalis, cement, lime, common salt, crude oil and alcohol will not affect it. Some of these cars have been in service for as long as five years without need for repainting.

**Besides resisting** the effects of these cargoes on appearance and serviceability, alkali- and acid-resistant CARHIDE withstands mechanical damage and temperature and weather extremes to an unusual degree. It goes on quickly and easily. It dries so rapidly one-day finishing schedules can be maintained.

**It will pay you** to investigate the many money-saving benefits of Pittsburgh's alkali- and acid-resistant CARHIDE. Call on us for suggestions and advisory service. Our wide experience in this field may well save you many repaintings.

• • •

PITTSBURGH PLATE GLASS CO., Industrial Paint Div., Pittsburgh, Pa. Factories: Milwaukee, Wis.; Newark, N. J.; Springdale, Pa.; Atlanta, Ga.; Houston, Texas; Torrance, Calif.; Portland, Ore. Ditzler Color Division, Detroit, Michigan. Thresher Paint & Varnish Division, Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Division, Pittsburgh, Pa.

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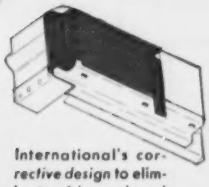
Center filler-reat draft lugs-center plate, one steel casting welded *integrally* into the bolster-center sill connections... International's *corrective design* for an *all*-welded underframe which has a history of *NO FAILURES!*



International's *corrective design* to eliminate side and end failure—an integral 3/16" W-section corner post, shorter span end side sheet and side post.

**Underframe, sides and ends become an integral unit.**

# International's CORRECTIVE DESIGN


International STEEL COMPANY

RAILWAY DIVISION EVANSVILLE 7, INDIANA

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## C-1 TRUCKS

**NATIONAL C-1 TRUCKS** use AAR Alternate Standard long-travel springs with either 2½", 3⅛" or 3¹⁵⁄₁₆" deflection. Each group consists of the standard AAR cluster.

## *Lading* is the passenger in freight cars — why not give it a *Comfortable* ride?

Lading rides easily on National C-1 trucks because they are built around an efficient constant-friction-control mechanism that reduces vertical and lateral shocks. Rugged, cast-steel friction wedges, with large bearing area, are positioned by low-stressed wedge springs against hardened-steel plates. All this, coupled with ease of visual inspection, makes a most effective combination.

**For more *and satisfied* shippers use National C-1 Trucks!**

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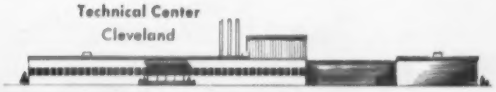

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# THE ENGINEER'S REPORT

DATA

LUBRICANT RPM Delo Oil R.R.

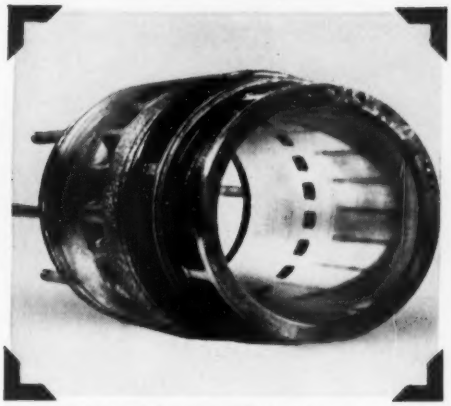
UNIT Diesel locomotive

SERVICE Mountain freight haul

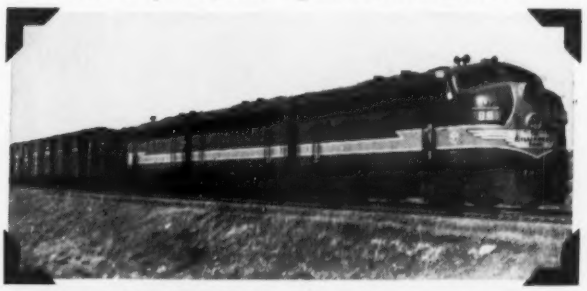
CONDITIONS Long, continuous grades to 1.6%

FIRM The Milwaukee Road

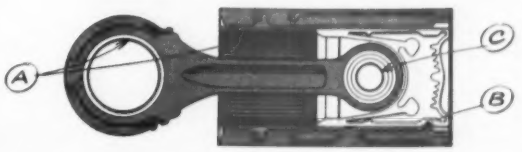
# 333,590 freight miles—only 0.0035 inch liner wear!



LUBRICATED WITH RPM DELO OIL R.R., this representative cylinder assembly was in good condition when pulled for regular inspection after 333,590 actual freight miles. Operation was on The Milwaukee Road's tough run between Othello, Washington, and Avery, Idaho. This liner, shown as it came from the engine, miked only 0.0035 inch wear, 0.001 inch taper, despite hard operating conditions—heavy loads, wide temperature variations, heavy grades, including one stretch of 20 miles of continuous 1.6 percent. Neither wristpin or bushing showed measurable wear.



## How RPM DELO Oil R.R. prevents wear, corrosion, oxidation




A. Special additive provides metal-adhesion qualities...keeps oil on parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent scuffing of cylinder walls.

C. Special compounds stop corrosion of any bushing or bearing metals and foaming in crankcase.

**FREE CATALOG:** "How to Save Money on Equipment Operation," a booklet full of valuable information, will be sent you on request to Standard Oil Company of California, 225 Bush St., San Francisco, Calif.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

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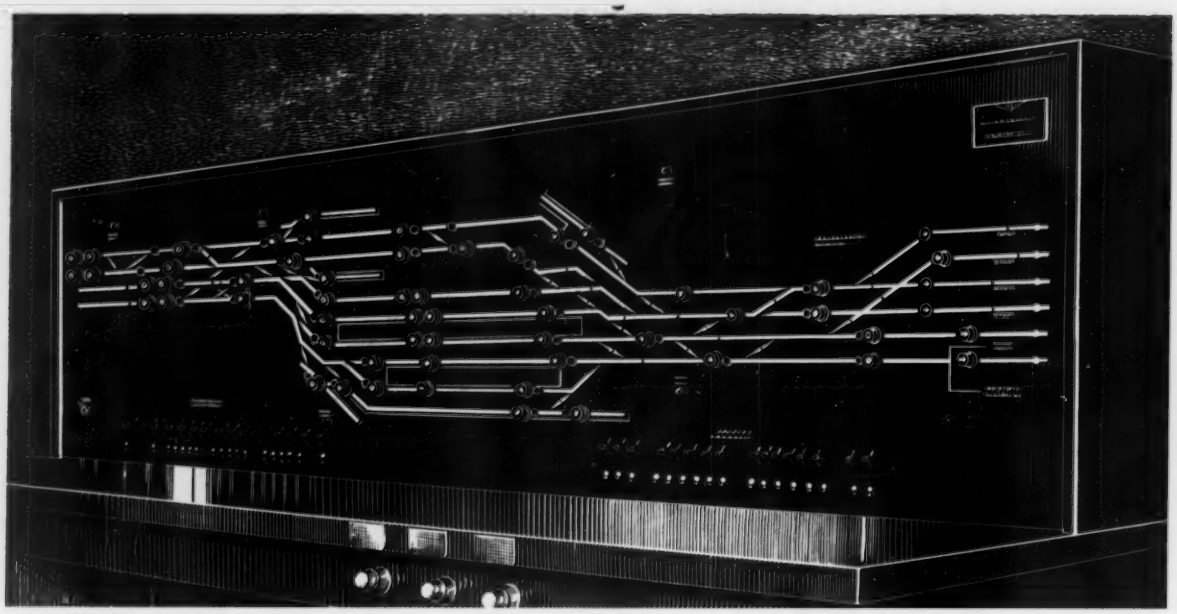
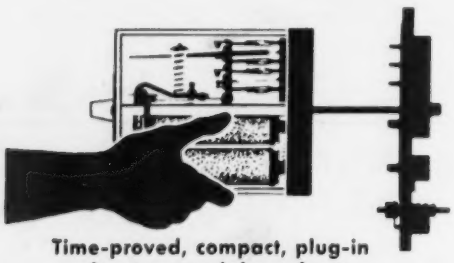
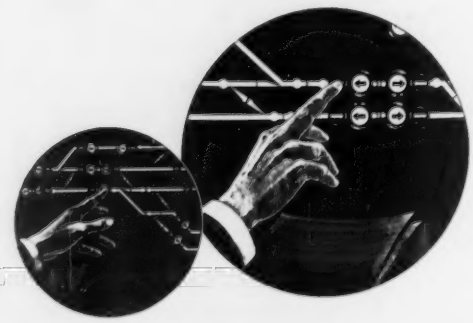
THE CALIFORNIA OIL COMPANY, Barber, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado



# FOR SPEED AND ACCURACY
# USE G-R-S NX ELECTRIC INTERLOCKING



Time-proved, compact, plug-in relays are used throughout.



Operator can line any available route manually, if desired.

With this NX control machine the operator controls 58 switch machines and 66 signals to set up more than 1000 routes a day. Trains move through the plant with speed and accuracy.

In this plant, as in all NX installations, the operator has a choice of:

- Route selection: automatic or manual
- Route line-up: entrance-to-exit, or signal-to-signal
- Route restoration: automatic or manual
- Signal control: automatic, semi-automatic, or manual

*Ask your G-R-S district office for further information.*

GRS GENERAL RAILWAY SIGNAL COMPANY 50th YEAR 1954